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SERIES 3: PRINTERS' MANUALS

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Caleb Stower:
The Printer's Grammar
1808

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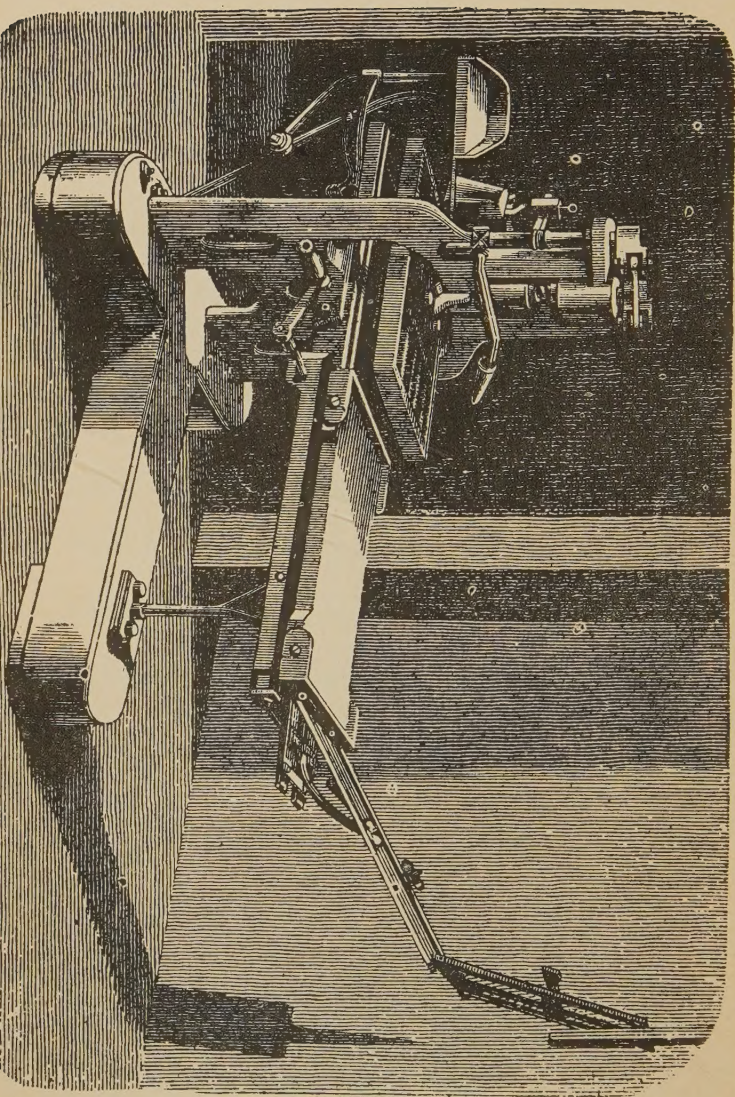
SERIES 3: PRINTERS' MANUALS

- 1 James Watson: The History of the Art of Printing 1713
- 2 John Smith: The Printer's Grammar 1755
- 3 Philip Luckombe: The History and Art of Printing 1771
- 4 Caleb Stower: The Printer's Grammar 1808
- 5 John Johnson: Typographia or the Printer's Instructor 1824
- 6 Thomas C. Hansard: Typographia 1825
- 7 Charles H. Timperley: The Printer's Manual 1838
- 8 William Savage: A Dictionary of the Art of Printing 1841

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PRINTED IN HOLLAND

The Stanhope Press.



THE
PRINTER'S GRAMMAR;
OR,
INTRODUCTION
TO THE
ART OF PRINTING:
CONTAINING
A CONCISE HISTORY OF THE ART,
WITH THE
IMPROVEMENTS IN THE PRACTICE OF PRINTING, FOR THE
LAST FIFTY YEARS.

BY C. STOWER, PRINTER.

Aided by thee—O Art sublime! our race
Spurns the opposing bonds of time and space,
With Fame's swift flight to hold an equal course,
And taste the stream from Reason's purest source,
Vice and her hydra sons, thy powers can bind,
And cast in Virtue's mould the plastic mind.

M^r Creery.

LONDON:

Printed by the Editor, 32, Paternoster Row,
FOR B. CROSBY AND CO. STATIONERS'-COURT.

1808.

TO THE RIGHT HONOURABLE

EARL STANHOPE.

MY LORD,

THE appropriation of the time and talents of a Peer of the Realm to the improvement of the Arts, merits the thanks of a British Public. It is not to any one solitary branch of these arts that your Lordship's attention has been devoted—your indefatigable and persevering genius has investigated almost every article of human ingenuity which is connected with the welfare and happiness of mankind.

But, my Lord, it is the object of this Dedication merely to notice your Lordship's improvements in the invaluable *Art of Printing*. Your merits in this respect are detailed in the subsequent volume; which is both enriched and decorated by the fruits of your diligence. Nor let this circumstance be forgotten by your Lordship, which I mention with peculiar pleasure, that your success has been eminently distinguished in that *Art*, which possesses the power, and which will most cheerfully employ that power, of conveying down the name of STANHOPE to the latest posterity.

I have, my Lord, the honour to remain,

Your Lordship's humble Servant,

C. STOWER.

London,
May 20, 1808.

PREFACE.

IN a work of this nature, intended to convey a practical knowledge of the Art of Printing, the reader must not expect to find that accuracy of composition which is generally displayed in literary productions. My principal aim has been to render the directions here given, clear and comprehensive.—Nor is this work offered as a specimen of typography. Unnecessary engravings or embellishments would have considerably enhanced its price, without affording any real advantage.

Smith's Printers' Grammar is the groundwork of this publication; and whatever in him was found to be worth preserving, is here introduced; though I now regret my having so closely adopted his phraseology, which is rather stiff and antique. Luckomb's History of Printing has also furnished me with several important and useful articles; but my principal obligations and thanks are due to some of the most respectable master-printers of the metropolis, for the readiness they have at all times evinced of assisting me in this undertaking. For the article on "Fine Printing," I am indebted to Mr. M'Creery, the intelligent author and printer of an elegant poem, entitled "The Press," published as a specimen of typography;—for the principal part of that "On the Qualifications of a Reader or Corrector of the Press," to Mr. Joseph Nightingale, author of a "Portraiture of Methodism," who holds the situation of Reader in one of our largest printing-offices. Mr. Richard Taylor has

also obligingly favoured me with a few observations on the Greek, intended to assist compositors and readers who are not Greek scholars; and I likewise feel much indebted to Mr. F. C. Fawcett and Mr. Fisher, for the assistance they have afforded me.

Great imperfection will, no doubt, be found in the execution of this work, and I am fully aware how much better it might have appeared from other hands; but I trust the severity of criticism will be somewhat softened, when it is considered that it has been undertaken in those hours only which I have been able to snatch from the numerous and complex duties of a laborious profession.

Should this work appear again before the public, many improvements will no doubt be made in it from the suggestions of friends, whose assistance I earnestly solicit, that it may be rendered more worthy of public notice and attention.

C. S.

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A CONCISE

HISTORY OF PRINTING.

Its Origin.

It appears truly astonishing, that any question could have arisen concerning the origin of an important discovery, of no earlier date than the 14th century.

That the invention of an art, so curious in its nature, and so highly beneficial in its consequences, should have been the boast and contention, not of individuals only, but of cities and countries, is less surprising, than, that the inventor should have neglected to secure to himself the honour of the discovery. Public gratitude, at least, might have been expected to perpetuate the name to which it owed such infinite obligations. But neither this, nor personal ambition, prevented the obscurity which has fallen on the subject, and which has nearly concealed from us the author, as well as the time and place in which his art commenced.

Posterity, however, has not been negligent in ascertaining the truth ; and though, from the multiplicity of evidence, and the contradictory facts adduced by contending parties, differences of opinion may still exist, yet, from an impartial survey, there appears a preponderance of testimony, calculated to produce conviction, and to form the judgment of those who candidly investigate the point.

To us, indeed, who are tenacious only for the use of this inestimable art, without having any pretensions to its original contrivance, it is less a matter of serious debate, than to those cities who would invest themselves with the credit of its discovery. But that which is valuable excites attention ; and thus it is, that to us the History of Printing becomes an object of laudable curiosity.

Though it might be presumed, that every thing would have contributed to render public, and to secure just celebrity to so glorious an undertaking, yet, at the time of its origin, circumstances of very opposite tendency had the ascendant.

The first reason to be assigned for the concealment of the art was its imperfect state during the short time it was suffered to remain in the hands of its original projector.

2dly. Pecuniary motives, which tempted the first printers, accustomed to the large sums usually paid for manuscripts, to sell their printed works as such ; so that for a time printing was as much the *counterfeit* as the *substitute* of writing ; being as it were the fac-simile of the hand-writing of the most approved scribes. The subject was further involved in obscurity by the number of persons jointly concerned in the practice of the art. The want of sufficient funds to answer the expenses of carrying on the business, induced persons of ingenuity to associate themselves with those of property, and by that

means their names were blended, and their merits rendered dubious.

These appear to be some of the principal causes of that concealment which at first prevailed ; but an invention so great and important could not be long secreted, and in a few years the surprising powers of the artist were discovered in a manner little suited to his wishes ; he being accused of witchcraft, upon his offering for sale a number of Bibles, which, resembling each other in every particular, was deemed a work beyond the reach of human skill. This happened in the year 1460, and it is uniformly agreed, that the commencement of the art could not have been earlier than about the year 1422, nor later than the year 1442. From the date of its origin, to the period just mentioned, presses were established in various parts of Europe ; and at the time, when intercommunication between different countries was unfrequent and difficult, each printer and each city could claim the honour of the invention, without the danger of immediate detection.

Haerlem, Mentz, Strazburg, and Venice, were thus put in competition ; and hence it was that, in process of time, partizans arose in favour of Laurens Koster of Haerlem, of J. Guttemberg and others of Mentz ; of Guttemberg and Mentilius of Strazburg, and of Nicolas Janson of Venice. The advocates of Nicolas Janson, or Johnsen, have been obliged to give up the cause, from the discovery of several books printed before the year 1461, at which period it is universally acknowledged that the earliest work of Johnsen was dated. The arguments of those who would defend the right of Strazburg, seem to be little more conclusive or satisfactory. Opinion is divided respecting the author of the invention in this place ; some attributing it to Mentilius, whom they assert (but

without sufficient authority) to have printed as early, or earlier, than the year 1447; others ascribing it to John Guttemberg, or Geinsfleisch, junior. But the introduction of the art already invented, or the more successful practice of it after it had been introduced, is all that belongs to either of those persons, and upon these different grounds their different pretensions were founded.

Wimphelingius, the oldest writer in favour of Strazburg, tells us, that Guttemberg was the inventor of "a new art of writing," *ars impressoria*, which he happily completed at Mentz; but he does not mention one book of his printing;—and in another book, he says, the art of printing was found out by Guttemberg, *incomplete*.

Trithemius tells us, in two different places, that Guttemberg spent all his substance in quest of this art; and met with such insuperable difficulties, that, in despair, he had nearly given up the hopes of success, till he was assisted by the liberality of Fust, and by his brother's skill in the city of Mentz. That his endeavours were unsuccessful in Strazburg, is further evident, from an authentic judicial decree of the Senate of Strazburg, in 1439, after the death of Andrew Drizehen, from which it appears, that Guttemberg, who was a native of Strazburg, and a man of great ingenuity, had engaged to instruct one Andrew Drizehen, or Drizehnus, in the art of polishing stones. Some time after, he engaged with one John Riff, in the art of making mirrors, or looking-glasses, as practised at Aix-la-Chapelle, and also in some other arts, in which Drizehen, and also Anthony Heilman, wished to be initiated; certain conditions were proposed and acceded to. Upon an accidental visit to Guttemberg, who resided in the suburbs of Strazburg, these two discovered that Guttemberg was busily em-

ployed in another mystery, which had been carefully concealed from them. After a few reproaches on their part, he proposed to instruct them in this also, on certain conditions. Among these it was stipulated, that a portion of the sum advanced by the parties to be instructed should be refunded to their heirs, if any of them should die within the space of five years. Drizehen died within the term. The conditions of the engagement were insisted upon by his heirs; a compliance with which was refused by Guttemberg, who was a litigious man, as is manifest from various instances. A process was the result of this altercation. In the course of the evidence given by different workmen, carpenters, servants, &c. it became evident that this mystery could be no other than that of erecting a printing-press. Orders were given by Guttemberg to his servants, immediately after the demise of Drizehen, to convey away from his house, in the most secret manner possible, certain implements, which upon full examination appeared to be a printing-press, with a certain quantity of letters cut in wood. This discovery was made the 26th of Dec. 1438.

A subsequent declaration made by one John Dunnus, before the magistrates in 1439, that he had received one hundred florins about three years before, for work done at a press, brings the epoch of the first attempt to about 1436.

The unfortunate Drizehen, in 1438, lamented to his confessor, that after having been at great expense, he had not been reimbursed a single *obolus*. Nor did Guttemberg himself, who persisted in his fruitless attempts, reap any advantage from them; for when he quitted Strazburg, he was overwhelmed in debt, and under the necessity of selling every thing he was in possession of.

Those who advocate the cause of Mentilius, advance

the title of nobility conferred upon him by the emperor Frederic III. This evidence was carefully preserved by his grand-daughter, and communicated to the world by J. Schottein, in an edition of the Ptolemaic Geography, published at Strazburg, 1520. Scott had married the grand-daughter of Mentilius. Richard Bartoline also, who published in 1531, attributes the invention to the same person, and he fixes the year to be 1441. Jeremiah Gebwiler, who was born in the year 1473, asserts that the invention was first made by Mentil, and afterwards imitated by Faustus.

Other evidence of a similar nature might be brought, were it not superseded by the account given by the learned and indefatigable Meerman, of all the depositions in the law-suit abovementioned, which proves that Guttemberg, although unsuccessful in his endeavours, was the first who thought of printing in Strazburg. If, however, this honour belonged to Guttemberg, the profit was Mentilius's; for by Jacob Wimphelingius we are informed, that, after the art was once established, Mentilius became rich, by printing many works in a correct and elegant manner. John Schottus, who took an opportunity of circulating a report which was likely to prove so advantageous to him among his countrymen, was probably more particularly excited to this by the conduct of John Schoeffer, of Mentz, who boasted in his Colophous (though not quite consistently with truth) that John Fust, his grandfather by the mother's side, was the inventor.

As Strazburg rivalled Mentz in its claim, why should Schottus give place to Schoeffer, or why Mentilius to Fust? If Schoeffer used artifice on one side, Schottus used more on the other. The former, without any testimony but his own repeated and confident assertions, drew

over many in favour of Fust, leaving Guttemberg out of the question ; and among others, even the Emperor Maximilian, who in 1518 granted Schoeffer an exclusive privilege of printing Livy. Schottus was silent while this Emperor lived ; but immediately after his death, he endeavoured to persuade his successor, Charles V. and the learned world, that Fust should be divested of his imaginary claim, and Mentilius be put in his place. To this purpose, from the year 1520, he prefixed his family arms to all the books he printed, which had been granted by Frederic III. to his grandfather and descendants ; adding to them an inscription, “ That they were granted to John Mentilius, the first inventor of Printing.” But the truth is, coat-armour had before been granted to the *typothetæ* and *typographi* to perpetuate the discovery ; but to Mentilius he granted them only as a private man, who was desirous of nobility, and the diploma contained not a word of the invention of printing ; nor did Schottus venture openly to assert, that it was granted to Mentilius for the invention of the art, lest he should be detected in a falsehood ; but contented himself by using an ambiguous expression to mislead inattentive readers.

There is little doubt but that Guttemberg's labours were ineffectual in Strazburg ; and although printing was afterwards successfully practised by Mentilius, yet there is no certain proof of a single book having been printed in that city, till after the dispersion of the printers in 1462, when Mentilius and Eggstenius successfully pursued the business. The former is, indeed, supposed by some writers to have begun printing about 1447, but no sufficient authority appears for such an assertion.

But having sufficiently investigated the plea for Strazburg, let us now inquire concerning that of Mentz. The great improvement which the art received in this place

and the many valuable books that issued from its press, together with other considerations of a similar tendency, have given great celebrity to this city, and had nearly established its claim over every other; yet, notwithstanding all that is advanced in its behalf, there is much contradictory evidence concerning the inventor of printing in this place.

Several monumental and other inscriptions agree in ascribing the honour of the invention to Mentz. It is manifest, from the date of the inscription on the stone before the house, inhabited by Guttemberg, that Wittigesis made this record in 1508; which is so proximate to the era in which it is asserted, that a printing-press was established at Mentz, that we may suppose Wittigesis to have been personally acquainted with Guttemberg, and to have received the account from himself. The inscription by Gelthus is without date, yet it is supposed to have been prior to the former; and although an authority equally respectable in favour of Geinsfleisch, yet it unites in attributing the honour to the town of Mentz. To the same purpose likewise is adduced the assertion inscribed in the Breviary, deposited in the library of the Franciscans, the claims of J. Schoeffer to the exclusive privilege of printing the edition of Livy. Several proofs of a similar nature, may be found in the sixth book of the Decretals, printed in the year 1465, and published by John Fust and Peter Schoeffer.

The most material circumstances concerning the invention are collected in the annals of J. Trithemius, who asserts, that he received them from the mouth of Peter Schoeffer himself. In his history of the year 1450, Trithemius thus writes: "About this time that wonderful and almost incredible art of printing, and *characterizing books*, was thought of and invented at Mentz, by John

Guttenberg, a citizen of Mentz, who having expended almost all his substance in the invention of this art, and struggling with great difficulties, both respecting his circumstances and the impediments which arose, was upon the brink of relinquishing the attempt; but he completed the undertaking through the advice and pecuniary assistance of John Fust, also a citizen of Mentz. They first printed a vocabulary, called the Catholicon, with the characters of letters *carved in wooden tablets, in a series, and composed in forms—imprimis agitur characteribus litterarum in tabulis lignis, per ordinem scriptis formisque compositis.* But as these could not serve for any other purpose, since the characters were not moveable from the tablets, but carved, they afterwards contrived better methods, and invented a manner of casting the forms of all the letters in the Latin alphabet, which they called matrices, from which they again cast brass and iron characters capable of sustaining any pressure, which they first cut with the hand."

Peter Schoeffer, who was first the servant, and afterwards the son-in-law of J. Fust, discovered an easier method of casting the types, and completed the art as it now remains. These three kept the printing art a secret for some time, until it was divulged by the servants, without whose aid it could not be carried on. It was first made known at Strazburg, and gradually spread into other countries. These three inventors of the art, if so they may be called, viz. Guttenberg, Fust, and Schoeffer, lived at Mentz, in the house of Zum Jungen, which afterwards retained the name of the printing-office.

Ulricus Zell and several French and Italian authors concur to prove, that the discovery was made in *Germany*. It appears an incontrovertible fact, that printing was exercised at Mentz, at an *early period*; and that it

was practised by *several persons*, to one or other of whom this invention has been attributed. It is also obvious, that while the citizens of Mentz are ambitious of monopolizing the honour respecting the *place*, they are by no means agreed, through whose medium, and by whose ingenuity, it was that they obtained this honour.

The principal authorities place the discovery between the years 1440 and 1450. As that great and astonishing undertaking to print the Bible was completed in the year 1450; and as it was printed in a superior manner, some years must be allowed for its preparation and execution. It is also well known, that the *Grammaticus Donati*, and the *Alexandri and Hispani Tractatus*, were published, with a very imperfect letter, about 1441 and 1442. Were printing, properly speaking, confined to a particular mode; that is to say, to the use of types formed of *metal* and not of *wood*—in this contest the palm of victory might, without hesitation, be ceded to Mentz; but as the origin of printing is rather to be ascribed to the time when books began to be made by *means of an impression*, and *not with a pen*, we must leave Mentz with all the credit of its *improvement*, in quest of more satisfactory evidence concerning the rudiments of the art, and with this view we proceed to *Haerlem*; and having traced it to the only remaining place which lays claim to the discovery, it will likewise, in this case, be more easy to ascertain the name of the person to whom it belongs.

Ulricus Zell, in the annals of Cologne, between 1470 and 1500, attributes the invention of *metal types* to Mentz, but asserts that *printing* was introduced into Mentz, by the imitation of Donatus, which had before been printed in Holland. Mariangelus Accursius bore testimony to the same effect. Fragments of the dialogues of Jan van Zuren, alias Zurenus, jun. collected by Scrive-

rius, attribute the invention to Haerlem. Ludovicum Guiceiardini, who published the History of Holland, in the year 1565, not only mentions Haerlem, as the first place where printing was exercised, but enumerates many particulars similar to those published by Junius, the Dutch historian, who wrote about ten years after him. D. V. Coornhert mentions it as a well-known fact, that the art originated in Haerlem, and was conveyed to Mentz in a surreptitious manner ; but that it was advanced to a great degree of perfection in that place, many other authorities may be produced ; but the most regular and consistent history of the invention is given by the celebrated historian of Holland, Hadrianus Junius (or Adrian Young). He was rector of the Latin School, and teacher of natural philosophy at Haerlem for several years, and was universally esteemed a man of great integrity and impartiality. He wrote the History of Holland in elegant Latin. His work was published after his death, in 1578. In his account of the city of Haerlem, he gives the following particulars relative to the invention of printing : “ About 120 years ago, one Laurence Zanssen, Koster, inhabited a decent and fashionable house in the city of Haerlem, situated on the market-place opposite the royal palace.” (This is now the town-house). “ The name of Koster was assumed, and inherited from his ancestors, who had long enjoyed the honourable and lucrative office of Koster or Sexton to the church.” (Sexton approaches the nearest in office to Koster, but is far distant in dignity as well as profit). “ This man deserves to be restored to the honour of being the first inventor of printing, of which he has been unjustly deprived by others who have enjoyed the praises due to him alone. As he was walking in the wood contiguous to the city, which was the general custom of the richer citizens, and men

of leisure in the afternoon, and on holidays, he began to cut out letters on the bark of the beech" (or more probably, from a piece of the inner part of the wood cut for the purpose); "with these letters he enstamped marks upon paper in a contrary direction, in the manner of a seal; until at length he formed a few lines for his own amusement, and for the use of the children of his brother-in-law;" (or, as some say, of his daughter's children). "This succeeding so well, he attempted greater things; and being a man of genius and reflection, he invented, with the aid of his brother, or son-in-law, Thomas Pieterison, a thicker and more adhesive ink, as the common ink was too thin and made blotted marks." (This Thomas Pieterison left three sons, all of whom were advanced to the regency). "With this ink he was able to print blocks and figures, to which he added letters. I have seen specimens of his printing in this manner. In the beginning he printed on one side only. This was a Dutch book, entitled *Spiegel enser Behoudenisse*. That it was one of the first books printed after the invention of the art, appears from the leaves, which are pasted together, that the naked sides might not be offensive to the eyes; and none at first were printed in a more perfect manner. As this new species of traffic attracted numerous customers, thus did the profits arising from it increase his love for the art, and his diligence in the exercise of it. He engaged workmen, which was the source of the mischief. Among these workmen was one Jan—whether his surname be that of Faust, or any other, is of no great importance to me; as I will not disturb the dead, whose consciences must have smote them sufficiently while living. This Jan, who assisted at the printing-press under oath, after he had learned the art of casting the types, setting them, and other articles be-

longing to the art, and thought himself sufficiently instructed, having watched the opportunity, as he could not find a better, he packed up the types and the other articles on Christmas eve, while the family was engaged in celebrating the festival, and stole away with them. He first fled to Amsterdam, thence to Cologne, until he could establish himself at Mentz, as a secure place, where he might open shop, and reap the fruits of his knavery. It is a known fact, that within the twelve months, that is, in the year 1440, he published the *Alexandri Galli Doctrinale*, a grammar at that time in high repute, with *Petri Hispani tractatibus logicis*, with the same letters which Laurens had used. These were the first products of his press. These are the principal circumstances that I have collected from creditable persons, far advanced in years, which they have transmitted like a flaming torch from hand to hand; I have also met with others who have confirmed the same," &c.

He then proceeds to relate what Nicolas Gael, his schoolmaster, used to repeat concerning the indignation of Cornelis, the bookbinder, (who assisted at the printing-office of Laurens) while relating the particulars of the theft; and to confirm the whole by the account given of the fact by Burgomaster Quirinus Salesius, who asserted that he also had heard similar things from the mouth of the bookbinder.

The claims of Haerlem are further asserted on the ground of internal evidence. Several copies of the *Spiegel de Behoudenisse*, which is one of the first books from the Haerlem press, still exists, and their appearance perfectly corresponds with what has been uniformly acknowledged respecting the rudeness of the impression. Mr. Meerman, in the second volume of his *Origines Typograph.* has favoured the public, not only with an accurate

imitation of the first page of that curious book, but with specimens of the progressive improvements that were made in the Haerlem press, in subsequent editions of that work, and in several other publications. To these he has prefixed curious specimens of the first essays made by Koster, in a little book evidently composed for the use of children. They consist of the alphabet, the Lord's prayer, the creed, and two or three other prayers.

The precise time in which printing was discovered by Laurens, is not ascertained ; but from circumstantial evidence they collect, that the first idea must have been suggested to Laurens about the year 1428, or 1430. This conjecture is strengthened by the state of printing at Haerlem, in 1440. An edition of Donatus, and the Latin of the Spiegel, in the title of *Speculum Salutis*, published in that year, indicate such essential improvements, that, considering the innumerable difficulties they had to surmount, several years must have been requisite to so great a degree of perfection.

The priority of time which Haerlem has to plead, is a strong argument in its favour. It was a great subject of triumph to its opponents, that the Dutch were not able to produce the edition of Donatus, printed in Holland before that which was printed at Mentz ; the only plausible excuse could be, that as the art was considerably advanced from its first rude state, the earliest, and more imperfect editions were destroyed as waste paper ; this opinion is confirmed by a fact related by Seiz, who published his treatise in 1740, wherein he mentions a Dutch psalter, purchased among other books at a sale by John Enschedi. It was bound in leather, and perceiving the cover fastened to the paper within by some slips of parchment (with printing in a very old character) he detached these slips, and found, to his surprise, that they were

fragments of a *Grammatica Donati*. The objections raised against the probability of the robbery are easily removed. It has been urged, that a printing-press, with all its implements, would be a most inconvenient thing to convey away by stealth. With the practical knowledge which the faithless servant must have acquired, and the perfect model, which he would carry in his mind, of the machine necessary for his purpose, it cannot be supposed that any thing more would be required than a few of the moveable wooden types, which at that time were in use at Haerlem; these would be easily packed up at a time when the other workmen were not only absent from their work, but otherwise engaged. No difficulty could arise from their bulk to hinder their concealment through the night, nor to prevent their being carried off early the next morning, as soon as the city gates were open; and the day subsequent to the robbery being likewise a holiday, would, in all probability, ensure him a retreat before his theft would be discovered. Thus it appears that the facts related by this historian are not at all incredible. It is necessary, however, to observe, that in the confusion of names which follows this event in the history of printing, he has suffered the thief to escape, and has attributed *his* crime to an innocent person.

We have no reason to believe Faust or Fust to have been other than a wealthy citizen of Mentz, who by *his* capital assisted in erecting the first printing press in that city. It is not to be imagined that he could be this dishonest servant. The charge lies with more force against John Geinsfleisch, sen. brother to John Geinsfleisch, or Guttemberg, who endeavoured to establish the art at Strazburg. These two brothers, though of a family distinguished by knighthood, were both of them poor; it is

probable also that they were both of them men of talent, though they neither of them seem to have been men of honour.

It is asserted that the younger brother (distinguished by the name of Guttemberg) derived his knowledge of printing from J. Geinsfleisch, sen. while the latter was a workman at the Haerlem press ; his knowledge, however, being imperfect, he was disappointed of success till after his establishment at Mentz. Their prosperity, after this, procured them a fame that might satisfy their most ardent wishes ; engaged in the publication of works, not of mere local importance, but on subjects and in a language suited to the taste of the learned and refined, they were honoured as the benefactors of mankind.

These printers, with their associates Fust, Meidenbachius, and others not named, after printing with wooden types several small works of frequent use, such as the *Tabula Alphabetica*, the *Catholicon*, *Donati Grammatica*, and the *Confessionalia*, published the Bible, in 1450, with large cut metal types, a work of immense labour and expense, which occupied seven or eight years in completing. In this same year the partnership was dissolved, and a new one entered into in August, between Fust and Guttemberg. A dissolution of this partnership ensued in 1455, after a law-suit which was determined against Guttemberg. Fust afterwards united with Schoeffer ; and Guttemberg, by the pecuniary assistance of Conrad Humery, syndic of Mentz, and others, opened another office in the same city.

The progress of the art has been thus traced through its second period, the invention of *cut metal types*, and for this improvement we are indebted to the two brothers. But the honour of completing the discovery is due to Peter

Schoeffer de Gernsheim, first the servant of Fust, but afterwards adopted as his son-in-law, in reward of his ingenuity.

Fust and Schoeffer concealed this new improvement, by administering an oath of secrecy to all whom they entrusted, till the year 1462 ; when, by the dispersion of their servants into different countries, at the sacking of Mentz by the Archbishop Adolphus, the invention was publicly divulged, and made rapid progress through different parts of Europe.

From the whole of this investigation, it appears fair to attribute the *origin* of the invention to Haerlem—the *improvement* to Mentz. The natural and pleasing account of the discovery made by Koster, has greatly the advantage over the confused and contradictory evidence in behalf of Guttemberg, or others. The servant of Koster may easily be imagined capable of conveying the art in a surreptitious manner from Holland to Germany ; but we must be much more credulous to conceive of the magistrate as defrauding another country of the invention, and setting up a rival press in his own city. It is likewise no less improbable, from the general course of events, that the discovery should have been made at the same time by different persons, at distant places, totally independent of each other. Productions the most valuable are frequently the result of mere accident. Hopeless would be the task of invention without the suggestion of some hint from which ingenuity might work—what more likely to cooperate with such ingenuity, than leisure, and a contemplative mind actuated by motives of affection ? All these circumstances appear in the case of Laurens, whereas no particulars whatever are given respecting the discovery as made by Guttemberg, or others. Many things, indeed, were in existence, that seem adequate to the awakening of

genius in this respect. *Engraving* had been practised for many ages. Analogous to this, likewise, was the manner of making impressions by seals, and the mode practised by the Grand Sultan, of setting his hand to an edict by an impression of his whole hand dipped in ink ; yet as the idea of modern printing never suggested itself to any one during so long a period, we have no reason to suppose that it sprung up suddenly in several places at once. It has been observed by some writers, that the Chinese invented a species of printing as early as the year 930, but the remoteness and the seclusion of this people render it improbable that any light could be derived from them. It has further been conjectured, that the notion of printing might have arisen from the artists employed in making playing cards. Buller, in "*Recherches Historiques sur les Cartes à jouer*," Lyons, 1757, supposes cards to have been first introduced between the years 1376 and 1380. Mr. Meerman, who considered the subject very accurately, allows they were in use still earlier, namely, before 1367 ; but will by no means agree that they were then formed from *engravings* of any kind, being only regular pieces of painted paper. They are now printed from *blocks*, by an operation different from that of the printing-press, and the court cards are afterwards coloured.

Whatever might be the idea which excited the inventive powers of the author, we have reason to rejoice in the fruit of his labours ; never was human thought and industry crowned with so ample an harvest ! Instruments have been contrived to facilitate the progress of the artificer ; machines have been invented to ease the toils of the labourer ; but the benefit of the discovery applies to all who have intellect, to the whole of the civilized world ; by its assistance the powers of the mind are enabled to

expand and exercise themselves. Curiosity is awakened—it no longer groans under the pressure of ignorance; thought becomes active and vigorous; knowledge proceeds with accelerated motion; and truth, virtue, and happiness, are the glorious result.

Introduction of the Art into England.

Difficulties, similar to those concerning the *origin* of printing in other countries, arise respecting the *introduction* of the art into our own. Probably the same causes have in either case produced corresponding effects. The ground of the controversy was not sufficiently ascertained, and of course the disputants were not likely to unite in a satisfactory conclusion. William Caxton, a mercer and citizen of London, is the name most dwelt upon in this dispute. His character as an Englishman, a man of good reputation, of extensive knowledge, and of known skill and considerable practice in the art, gives him a pre-eminence above his competitor, Frederic Corsellis, which nothing but the testimony of undoubted facts should be able to diminish. Whether such authorities are producible or not, is the present subject of inquiry.

The mistake seems to consist in this; the generality of writers have overlooked the invention of printing at Haerlem with wooden types, and have ascribed it to Mentz, where metal types were first made use of. So in England they have passed by Corsellis, or the first Oxford printer whoever he was, who printed with wooden types at Ox-

ford, and only mentioned Caxton as the original artist, who printed with metal types at Westminster*.

It was uniformly asserted by our earliest writers, that printing was introduced and first practised in England by William Caxton, who, by his travels abroad and residence of many years in Holland, Flanders, and Germany, in the affairs of trade, had an opportunity of informing himself of the whole method and process of the art; and that after his return, by the patronage of the great, and especially of the Abbot of Westminster, he first set up a press in that Abbey, and began to print books soon after the year 1471. This tradition prevailed till a book, which had scarcely been noticed before the Reformation, gained the attention of the curious. It was dated from Oxford, Anno 1468. This was immediately considered as a clear proof and monument of the exercise of printing in that University, several years before the erection of the press by Caxton.

This book, which is in the public library of Cambridge, is a small volume of 41 leaves in quarto, with this title: "Expositio Sancti Jeronimi in Simbolum Apostolorum ad Papam Laurentium:" and at the end, "Explicit expositio, &c. Impressa Oxonie, & finita Anno Domini MCCCCLXVIII. XVII. die Decembris."

The appearance of this book robbed Caxton of a glory that he had long possessed; and Oxford ever since carried the honour of the first press. One difficulty, however, still remained; the silence of history concerning an event so memorable, and the want of any memorial, even in the University, of the establishment of a new art among us, so useful and beneficial to learning; but this

* See Meerman, vol. ii. p. 7 and 8.

likewise has been cleared up, by the discovery of a record, which had lain obscure and unknown at Lambeth House, in the register of the Sec of Canterbury, which gives a narrative of the whole transaction, drawn up at the very time. An account of this record was first published in a thin quarto volume, in English; with the title—"The Original and Growth of Printing, collected out of history and the records of this kingdome: wherein it is also demonstrated, that printing appertaineth to the prerogative royal; and is a Flower of the Crown of England, by Richard Atkyns, Esq.—Whitehall, April 25, 1664. By order and appointment of the Right Hon. Mr. Secretary Morrice, let this be printed. Thomas Rycaut. London: printed by John Streater, for the Author, 1664." 4to. This sets forth, that as soon as the art of printing made some noise in Europe, Thomas Bouchier, Archbishop of Canterbury, moved the king, Henry VI. to use all possible means for procuring a printing-mold (for so it was then called) to be brought into the kingdom. The king listened to the proposal, and taking private advice how to effect the design, concluded that it could not be accomplished without great secrecy, and a considerable sum of money to enable the person or persons employed to draw off some of the workmen from Haerlem in Holland. One thousand marks were judged necessary, towards which sum the archbishop contributed three hundred. The money being prepared, the management of the design was committed to Mr. Robert Turnour, who was then Master of the Robes, and highly in favour with the king. Mr. Turnour took with him Mr. Caxton, who, trading much in Holland, had a creditable pretence not only for going into the Low Countries, but for his continuance there. Mr. Turnour was in disguise, his beard and head shaven; but Mr. Caxton appeared known

and public. Having received the thousand marks, they went first to Amsterdam, then to Leyden, not daring to enter Haerlem itself, for the town had shewn its jealousy by apprehending and imprisoning several persons who came from other parts for the same purpose. Having expended the thousand marks, the king sent them five hundred more. Turnour engaged the assistance of two Hollanders in bringing off Frederic Corsellis, an under workman at the Haerlem press, who late one night stole from his fellows, in disguise, and, entering a vessel prepared for his reception, sailed immediately with a fair wind. But as it was not judged so prudent to set him to work in London, by means of the archbishop (who had been Vice Chancellor and afterwards Chancellor of the University of Oxford) he was sent thither with a guard, to prevent his escape, till he had performed his contract.

From the authority of this record, some later writers declare Corsellis to have been the first printer in England. Among these are Mr. Wood, the learned Mattaire, Palmer, and Bagford. Inconveniences arising on account of the distance of the Oxford press from London, and from the sea, the king had a press established at St. Albans, and another in the city of Westminster, where they printed books of divinity and physic. Dr. Conyers Middleton, in his Dissertation concerning the Origin of Printing in England, considers this piece of history as "*fabulous*," and bearing "evident marks of forgery;" his arguments are *plausible*, and, without further investigating the subject, they might appear conclusive.

The period specified of its introduction at Oxford seems utterly unsuitable for the purpose, being at a time when the prince was struggling, not only for his crown, but for his life, he could have little leisure or inclination

for a project of this nature. To this it has been answered*, that notwithstanding all the troubles of his reign, this king laid the foundations for two of the greatest seminaries of literature in England; Eton, and King's College, Cambridge; and bestowed his royal munificence on the two colleges in Oxford; why, therefore, should the introduction of printing in his reign be thought impossible? Dr. M. is further inclined to doubt the genuineness of this record, from the silence of Caxton concerning a fact in which he was so principal an actor, especially as it was his constant custom to give an historical account, in the prefaces or conclusions of his works, of all his labours and transactions, as far as they respected the printing and publishing of books; but if the force of this remark be acknowledged, it will apply with equal, or superior weight against his own hypothesis; for had Caxton been the first printer in this country, it is more unaccountable that he should have neglected to communicate so important a circumstance in his own history, than that he should have been silent in a case wherein his agency was but secondary and subordinate. Caxton, he adds, was still found *beyond sea* twelve years after the supposed transaction of bringing over Corsellis, "learning with great charge and trouble the art of printing, which he might have done with ease at home, had he got this printer in his own hands." To this it is replied, that although Caxton was an assistant with Turnour in bringing over Corsellis, it is no where supposed that he came with him into England†. It is rather supposed that he himself continued abroad for improvement in the art. The manner of casting metal types being divulged in 1462, by the

* The Origin of Printing, in two Essays, 2d edit. 1776.

† Meerman, vol. ii. p. 34.

workmen of Mentz, he would naturally be anxious to acquire this advantageous branch before his return home. Caxton tells us, in the Preface to the History of Troye, that he began that translation, March 1, 1468, at Bruges ; that he proceeded on with it at Ghent ; that he finished it at Cologne, 1471, and printed it probably in that city with his own types. He was thirty years abroad, chiefly in Holland ; and lived in the court of Margaret Duchess of Burgundy, sister of our Edward IV. It was therefore much easier to print his book at Cologne, than to cross the sea to learn the art at Oxford, especially since he had *there* the opportunity of practising it in an improved state. And to anticipate in this place another of Dr. M.'s objections, which is grounded on the supposed mistake of the publisher of the record in speaking of Uaerlem and not of Mentz, as the place where the art originated, and whence it was derived, it may be remarked, that the method of *casting* the types, which was discovered at Mentz, was such an improvement, that it was regarded by many as the *original* of printing ; and Caxton, as most others do, ascribes that to Mentz.

The Lambeth record, it is stated by Dr. M. " was never heard of before the publication of Atkins's book, nor has it ever since been seen or produced by any man, though the registers of Canterbury have been diligently and particularly searched for it : " he therefore conjectures that Atkins, whom he considers a bold and vain man, personally interested in the dispute, might be the inventor of this pretended record ; or if not the inventor, at least the dupe of some one who was so. But is it likely that Atkins would forge a record, to be laid before the king and council, which his adversaries could disprove ? For at this time he was engaged in an expensive

law-suit with the Company of Stationers, in defence of the king's patents, under which he claimed some exclusive powers of printing.

John Bagford, in his History of Printing at Oxford, tells us, that he knew Sir John Birkenhead had an authentic copy of it in 1665, (which Bagford by mistake calls 1664 and is followed in it by Meerman) when Sir J. Birkenhead was appointed by the House of Commons to draw up a bill relating to the exercise of that art. This was confirmed by the Journals of that House, Friday, Oct. 27, 1665, vol. viii. p. 622, where it ordered, that this Sir John Birkenhead should carry the bill on that head to the House of Lords, for their consent. The act was agreed to in the Upper House, on Tuesday, Oct. 31, and received the royal assent on the same day; immediately after which the parliament was prorogued*. It is probable then, that after Mr. Atkins had published his book in April, 1664, the parliament thought proper, the next year, to inquire into the right of the king's prerogative; and that Sir John Birkenhead took care to inspect the original, then in the custody of Archbishop Sheldon; and finding it not sufficient to prove what Mr. Atkins had cited it for, made no report of the manuscript to the House, but only moved that the former law should be renewed. The manuscript was probably never returned to the proper keeper of it; but was afterwards burnt in the fire of London, Sept. 13, 1666.

That printing was practised at Oxford, was a prevailing opinion long before Atkins's account. Bryan Twyne, in his "*Apologia pro Antiquitate Academiæ Oxoniensis*," published 1608, tells us, "It is so delivered down in *ancient writings*," having heard probably of this Lambeth

* See Journals of the House of Lords, vol. ii. p. 700.

MS. And King Charles I. in his letters patent to the University of Oxford, March 5, 1635, mentions printing as brought to Oxford from abroad. As to what is objected that it is not likely the press should undergo a ten or eleven years sleep, viz. from 1468 to 1479, it is probably urged without foundation. Corsellis might print several books without date, or name of place, as Ulric Zell did at Cologne, from 1467 to 1473, and from that time to 1494, Corsellis's name, it may be said, appears not in any of his publications; neither does that of Johannes Petershemius*. Or admitting this suspension of his labours, the civil wars which broke out in 1469 might oblige him to shut up his press; and both himself and his readers be otherwise engaged for some time. Poets are not, it must be acknowledged, the best chronologers; but admitting their language deserving any regard, with respect to dates, we might mention the authority of Shakespeare, who, in his Second Part of Henry VI. introduces the rebel John Cade reproaching Lord Treasurer Say, thus: "That whereas before our forefathers had no other book but the score and the tally, he had caused *printing* to be used." Shakespeare, indeed, differs from the Lambeth MS. in making Lord Say the instrument of importing it, instead of Archbishop Bouchier, and of course dated the event some years earlier. This can only be reconciled by supposing that Lord Say first laid the scheme, and sent some one to Haerlem, though without success; but after some years it was attempted happily by Bouchier.

Dr. Middleton having dismissed, as he thinks satisfactorily, the authenticity of the MS. accounts for the date of the book, by supposing that it shared the fate of se-

* See Meerman, vol. i. p. 34. vol. ii. p. 21—27.

veral other books, which either by design, or inadvertence of the printer, have suffered a transposition, or an omission in the figures ; in this case, he conjectures an X to have been omitted. To this a writer in the Weekly Miscellany, Saturday, April 26, 1735, who signs himself Oxonides, replies, “ that we should not attempt to set aside the authority of a plain date, without very strong and cogent reasons.” He further remarks, “ the type used in this our Oxford edition seems to be no small proof of its antiquity : it is the German letter, and very nearly the same used by Fust, (who has been supposed to be) the first printer ; whereas Caxton and Rood used a quite different letter, which was soon after introduced by De Worde and Pynson.” The supposed year of the edition being much about the time that the printers at Mentz dispersed, together with the sort of letter used, led him also to think, that not Corsellis from Haerlem, but one of these printers, might have been the person who first came over to England, and followed his profession at Oxford.

As to Dr. M.'s objection against the priority of the Oxford book, on account of the neatness of the letter and the regularity of the type, it is observed, that printing was almost in its infancy brought to perfection, but was afterwards debased by later printers, who consulted rather the cheapness than the neatness of their work. Caxton and Rood were indifferently good printers, De Worde and Pynson were worse ; and those who followed them most abominable. Dr. M. is shewn to be mistaken in the time and place of the invention of signatures, which he adduces as a proof against the genuineness of the date of the Oxford book ; whereas in reality the use or neglect of these marks furnish no argument in this point. The letters of the alphabet placed at the bottom of the

page, to shew the sequel of the page and leaves of each book, are said to be found in very ancient MSS. which the earliest printers very studiously imitated; and they were used in some editions from the office of Laurens Koster, though afterwards discontinued, or only sometimes adopted. The still more necessary improvement of numbering the leaves, (practised by Caxton, as may be seen by an *Æsop's Fables* in the Bodleian Library) was afterwards disused by himself, and by later printers in England.

The famous J. Leland, library-keeper to Henry VIII. and others, call Caxton "the first printer of England," probably from his being the first who practised the art with *fusile types*, and consequently first brought it to perfection; and this is not inconsistent with Corsellis's having printed earlier at Oxford, with *separate cut types in wood*, which was the only method he had learnt at Haerlem. On this ground it is evident that Guttenberg and Fust were complimented at the expense of Koster. There was another similarity, also, between the fate of the Haerlem and the Oxford printer; *time* and *place* seemed unfavourable to their celebrity, while their successors enjoyed every advantage in both these respects, together with the most important one of having their names annexed to their publications. If the common language of the historian requires the sanction of original testimonies, much more necessary is it to authorize the loose and figurative style of poetry. Hence one of the verses, at the end of the last book printed at Oxford, which is thought by Dr. Middleton to leave no doubt of Caxton's being the first printer, is judged by others to express nothing more than this, that the art of printing, for which the Venetians, and particularly Janson, had been so famous, was now practised with equal success in England. And

indeed it is probable, that the design of Rood in those verses was rather to extol his own press than that of Caxton.

Concerning the practice of an art so novel in England as that of printing, it is not surprising that Caxton himself, or those who wrote of him, should express themselves in a manner that should seem to represent him as the first printer in this country. Our first printers in those days of ignorance met with but little encouragement ; they printed but few books, and but few copies of those books. Afterwards, when the same books were re-printed more correctly, those first editions, which were not as yet become curiosities, were put to common uses. This is the reason we have so few remains of their works. We have only four books of Theodorick Rood, who seems from his own verses to have been a very celebrated printer. Of John Lettou, William de Machlinia, and the Schoolmaster of St. Albans, we have scarcely any remains. Therefore, were it admitted that Corsellis (or the Oxford printer, whatever his name might be) followed his business from 1468 to 1479, yet time may have destroyed his intermediate works ; whereas Caxton, who practised the art, with all the facilities of its improvement, and whose good conduct, even from early life, seems to have been rewarded with success and respectability, lived to old age in great repute, published a considerable number of books, and flourished in the sunshine of the court. He served an apprenticeship to one Robert Laye, a mercer, who, after having been Sheriff and Lord Mayor of London, died in 1441, and left William Caxton thirty-four marks, which was a considerable legacy in those days. From the time of his master's death he spent the following thirty years as a merchant abroad, where, in 1464, we find him employed by Edward IV. in

a public and honourable negociation, jointly with one Richard Whitehall, Esq. to transact and conclude a treaty of commerce between the King and his brother-in-law the Duke of Burgundy, to whom Flanders belonged. The commission styles them Ambassiatores, Procuratores, Nuncios, and Deputatos Speciales; and gives to both or either of them full powers to treat, &c. He lived, as we have already remarked, many years in the court of the Duchess of Burgundy, to whom, as well as to Edward IV. and his brother the Duke of Clarence, some of his works are addressed. He likewise printed for Henry VII. and his son prince Arthur. It has been generally asserted, that all his books were printed in the Abbey of Westminster, yet we have no assurance of it from himself; nor any mention of the place before 1477, which was several years after he began printing. It has also been represented, that John Islip was the abbot who first encouraged the art, and entertained the artist in his house. But it appears that he was not made abbot till four years after Caxton's death, and that Thomas Milling was abbot in 1470, made Bishop of Hereford a few years after, and probably held the Abbey *in commendam* in 1485, in which John Estney next succeeded; so that Milling, who was reputed a great scholar, must have been the generous friend and patron of Caxton, who gave that liberal reception to an art so beneficial to learning.

It is probable that the first book printed by Caxton was *Recuyel of the Historyes of Troye*. After he had finished the translation, which must have been the year 1471, or soon after, he would not of course delay the impression longer than necessary, since, as he informs us in the conclusion of the third volume of that work, he was engaged by promise to his friends, who seem to have been pressing and in haste, to deliver copies of it to them as

soon as possible. This it is likely he printed at Cologne. In the recital of his works* he names this before *The Game of Chess*, which was the first book printed in England. It bears marks, likewise, of earlier antiquity than any other, in the rudeness of its letter, the incorrectness of the language, and the great mixture of French words found in it.

It would encroach too much on our limits, even were it in our power to give a complete list of the works of Caxton. He was a historian, as well as a translator and a printer. There is no clear account left of his age; but he was certainly very old, and probably above fourscore at the time of his death.

In the year 1471, he complained of "the infirmities of age creeping upon him, and enfeebling his body †;" yet he lived twenty years after, and pursued his business with extraordinary diligence in the abbey of Westminster till the year 1491, in which he died. This Mr. Ames has proved from his epitaph, and the edition of *Catal. Biblioth. Harl.* vol. iii. p. 127.

Although favoured with royal patronage, there is no reason to believe that the first printers, and that Caxton in particular, were sworn servants to the crown. Caxton gives not the least hint of any such character or title, though it seems to have been instituted not long after his death; for of his two principal workmen, Richard Pynson and Wynkin de Worde, the one was made printer to the king, the other to the king's mother, the Lady Margaret. Pynson gives himself the first title in "*The Imitation of the Life of Christ*," printed by him at the command of the Lady Margaret, who had translated

* Maittaire Supplem. ad tom. 1, *Annal.* p. 440, not. 4.

† Recule, end of 3d Book.

the 4th book of it, from the French in the year 1504; and Wynkin de Worde assumes the second, in "The Seven Penitential Psalms," expounded by Bishop Fisher, and printed in the year 1509. But there is the title of a book given by Palmer, that seems to contradict what is here said of Pynson, viz. *Psalterium ex mandato victoriosissimi Angliæ Regis Henrici Septimi, per Gulielmum Fanque, Impressorem Regium, Anno MDIII.* which being the only work that has ever been found of this printer, makes it probable that he died in the very year of its impression, and was succeeded immediately by Richard Pynson, whose use of the same title so soon after shews the writers to be mistaken in this particular.

If, however, the art, or those who practised it, sought the royal favour and countenance, it was a privilege which monarchs might glory to confer. The benevolent of every kind, and more especially kings as the fathers of their people, cannot bestow more valuable gifts on their more-extended family, than by encouraging among them the exercise of an investigation so adapted to their instruction, so calculated for their improvement in social and in public virtue.

Having, in the foregoing pages, endeavoured to give a concise account of the origin of printing, and its introduction by Caxton into this country, it will be necessary to make some observations on the great degree of elegance to which our art has arrived. Fine printing was first introduced by the ingenious Baskerville, who happily succeeded in producing a type of superior elegance, and an ink which gave additional beauty to the type. The peculiar excellence attached to Baskerville, and the consequent celebrity he obtained, gave a stimulus to the exertions, and drew forth the emulation, of many of our countrymen; but to no one are we more indebted for our

present superiority in the typographic art, than to the talents and ingenuity of Mr. Bensley, from whose press have issued some of the finest specimens of typography that are to be found in this country, or in Europe. I feel great pleasure in paying this just tribute of praise to a gentleman, who has devoted the greater part of his life to the improvement of a profession, which stands pre-eminently above all others——

“ The meteor-beam that science lent mankind,

“ Darting effulgence on the inquiring mind *.”

* Vid. M'Creery's elegant Poem, “ The Press,” p. 2.

THE
PRINTERS' GRAMMAR,
&c.

IN compiling a work of this nature, to which the learner and inexperienced may have recourse for instruction, and the adept occasionally find information, it will be necessary to bring forward every subject, however remotely connected with the art and mystery of printing. It is hoped, that those who may be disinclined to peruse some of the subjects here treated on, and who may conceive their introduction but of little moment, will have the candour to allow, that to others they will appear of the first importance, as containing information, of which, without having this work in their possession, they might have remained totally ignorant. Without further digression we will begin with describing

The Properties and Shapes of Types.

Those made use of in England are called Roman, Italic, and Black. Roman is, at present, in general use; and has long been the national character not only of this

country, but also of Portugal, Spain, France and Italy. In Germany, and the kingdoms and states which lie round the Baltic, letters are used which owe their foundation to the Gothic character; but even in those nations works are printed in their own language with Roman letters. The reason why the Germans, and those who patronize the Gothic characters, have not altogether rejected them for the Roman, has been chiefly owing to their apprehensions of sharing the fate of the primitive printers, who suffered greatly in their attempt, from the dislike the learned then shewed to works which had been printed in that character, and were compelled to return to their old mode of using the Gothic, to which men of literature were more accustomed, from its resemblance to the writings of the monks, and which at that time were held in great veneration. From the superstition of the age, the lower classes were easily prevailed on to reject whatever had the slightest appearance of encroaching on monastic influence.

The same reason may be assigned why the Dutch still adhere to the black letter, in printing their books of devotion and religious treatises, while they make use of the Roman in their curious and learned works.

In Sweden much greater improvements have been made, owing, principally, to the countenance and support of men of authority, learning, and taste. We may reasonably hope, from the pleasing aspect of the present age, when mankind have dared to burst the fetters of prejudice and antiquity, and have determined to exercise their better judgment, and adopt plans more congenial to true taste, that the Roman character will be universally employed in all civilized states.

The Roman letter, it may be concluded, owes its origin to the nation from whence it derives its name, though the

face of the present and the ancient Roman letters materially differ, from the improvements they have undergone at various times.

The Germans, and their confederates, differ from us in calling those letters *Antiqua*, which we, as well as the French, and other nations, term *Roman* ; an inquiry into the cause of this distinction can be of small importance, further than it might prove a desire in the Germans to deprive the ancient Romans of the merit of forming those letters.

That good Roman makes the best figure in a specimen of typography, cannot be disputed ; and this superiority is greatly improved by the founders of the present day. A printer, in his choice of type, should not only attend to the cut of the letter, but also observe that its shape be perfectly true, and that it lines or ranges with accuracy. The quality of the metal of which it is composed demands also his particular attention. The ingenious Mr. Moxon says, “ that the Roman letters were originally intended to be made to consist of circles, arches of circles, and straight lines ; and that therefore those letters that have these figures either entire, or else properly mixt, so as the course and progress of the pen may best admit, may deserve the name of true shape.”

By attending to the above mathematical rules, the letter-cutter may produce Roman characters of such harmony, grace, and symmetry, as will please the eye in reading, and, by having their fine strokes and swells blended together in due proportion, will excite admiration in those who may take the pains of comparing the smaller with the larger sized letters.

It is equally important that the types should have a deep face, which ill depend upon the depth of the punches, and their hollows being in proportion to the

width of the respective letters, and likewise that the punches are sunk into the matrices ; for should there be a defect in this respect, the type will prove unprofitable to the purchaser. Some letters are more liable to lose their appearance than others, from containing finer strokes, or from their being more generally used, as the a, e, f, t, &c. The necessity of re-casting such sorts must be obvious, for by so doing a fount may be continued serviceable, where it was thought to be generally defective, when, in fact, the blemish rested solely with those particular sorts.

The composition of type metal depending entirely upon the discretion of the founder, and a considerable difference prevailing among them, often to the detriment of the printer, to whom it is a matter of great import that his type should repay him ample interest for its immense expense, we shall refer again to the ingenious Mr. Moxon, who has particularized the species and quantities he made use of. “To 28lbs. of metal, it required 25lbs. of lead, mixed with 3lbs. of iron and antimony melted together.”

In Germany, steel, iron, copper, brass, tin, and lead, are incorporated with each other by means of antimony ; and the quality of this metal is such, if properly prepared, that it will not bend, but break like glass ; it is harder than tin and lead, something softer than copper, and melts sooner than lead. How the metal is prepared in Holland is not precisely known ; but there is sufficient reason to suppose that it differs both from the German and English.

In the choice of type, as before mentioned, attention should be paid to its ranging, or standing even in line, as perfection in this particular will generally take off the effect of an ill-shaped face ; but it is difficult to deter-

mine which of the two defects is the most unpleasant to the eye. The letters should also stand parallel ; that is, they must neither get in nor drive out at the head or foot ; a fault which cannot be too much reprobated, and is not to be remedied but by re-dressing the whole fount. Each letter should bear its due proportion as to thickness ; for it sometimes happens that a fount will be cast so unequal that some of the letters appear with a full face, and others with a thin one.

In ordering a fount of letter, care should be taken that the nick be made to differ from that of any other fount of the same body in the same house ; and also to have the nick cut deep. This may appear a trifling consideration ; but in a large fount the difference in weight will be considerable, and consequently a saving to the purchaser. A deep nick is also an advantage to the compositor, from its more readily catching the eye than a shallow one, and consequently greatly facilitates him in the business of composing.

Of Italic Letter.

Italic letters owe their invention to Aldus Manutius, by birth a Roman, and who, in the year 1490, erected a printing-office in Venice, where he introduced the Roman types of a neater cut, and invented that beautiful letter which we and most of the nations in Europe know by the name of Italic, though the Germans, and their adherents, show themselves as ungenerous in this respect as they did with the Roman, by calling it *Cursiv*, in order to stifle the memory of its original descent, and deprive the Romans of the merit due to their ingenuity.

It was at first called Venetian, from Manutius being a resident at Venice, where he brought it to perfection ; but not long after it was dedicated to the state of Italy, to prevent any dispute that might arise from other nations claiming a priority, as was the case concerning the first inventor of printing.

Italic was originally designed to distinguish such parts of a book as might be said not strictly to belong to the body of the work, as prefaces, introductions, annotations, &c. all of which it was the custom formerly to print in Italics, so that at least two-fifths of a work appeared in that character.

In the present age, it is used more sparingly, the necessity being supplied by the more elegant mode of introducing extracts within inverted commas, and poetry and annotations in a smaller-sized type. It is of service often in the displaying a title-page, or distinguishing the head or subject-matter of a chapter from the chapter itself.

It is greatly to be wished that the use of Italic could be governed by some rules. And here may we be allowed to recommend to those authors, who appear so solicitous, by their frequent introduction of Italic, that the beauty and essence of their writings may not be lost, to trust a little more to the discernment and understanding of their readers. That the frequent use of Italic is useless, and generally absurd, cannot be doubted. It also very materially retards the progress of the compositor, who has the trouble of repeatedly moving from one case to another in composing.

It is too often made use of to mark emphatical sentences or words, but without any direct rule. It destroys in a great measure the beauty of printing, and often

confuses the reader where it is improperly applied, who, pausing to consider why such words are more strongly noted, loses the context of the sentence, and has to revert back to regain the sense of his subject.

Not only does Italic confuse the reader, but the bold face of the Roman suffers by being contrasted with the fine strokes of the Italic ; that symmetry and proportion is destroyed, which it is so necessary and desirable to preserve, the former being a parallel, the latter an oblique position. Nor can we discover for what purpose it was at first introduced into the body of a work, in names of persons, places, dates, &c. unless that might have been thought an improvement, which the better judgment of the 18th century, much to its credit, considers otherwise. There can be little doubt, were gentlemen made acquainted with the inelegance of Italics, that they would, in giving directions with their works, dispense with an impropriety, hitherto continued only from custom. An advantage must also result to the printer, who would find it unnecessary to cast such extensive founts of Italic.

Let it not be imagined, from what has been said, that we enter our protest against the necessity of Italic in every instance ; its utility must be allowed in critical, and satirical works, &c. where the sense requires a distinguishing mark on a particular word or subject : we would wish to be understood as arguing not against the *use* of Italic, but the *abuse* of it.

Italic, if justly formed, discovers a particular delicacy, and requires considerable mathematical nicety in the letter-cutter to keep the slopings within the degree requisite for each body. But this is not always attended to, as a want of uniformity is too often observed in two lower-

case letters of a particular sort coming together, which require an hair space between them to prevent their riding, and occasions an unpleasant gap.

Of Black Letter ;

So called in England from its black face ; and by others old English, from its having been used in early times for printing our books of law, statutes, &c. It is descended from the Gothic character, and is therefore by others termed Gothic. It is now abolished in England, except in very few instances ; and even in acts of parliament it is, in a great measure, dispensed with. Its extinction altogether cannot be regretted by printers, to whom it was more expensive than Roman or Italic, its broad face requiring an extraordinary quantity of ink, which always gives the best coloured paper a yellow cast, unless worked with that of a superior quality.

Black letter sometimes has a good effect, in a title-page, if disposed with taste.

CHAP. II.

*Of the different Sizes of Printing Letters.*

THE following are the several bodies to which printing letters are cast in England.

1. Diamond	10. English
2. Pearl	11. Primer
3. Nonpareil	12. Great Primer
4. Minion	13. Paragon
5. Brevier	14. Double Pica
6. Burgeois	15. Two-line English
7. Long Primer	16. Two-line Great Primer
8. Small Pica	17. Canon
9. Pica	

Of these, Nos. 12, 13, 14, 15, 16, are termed titling letter, being generally used for that purpose. Above the size of canon, all letter is cast to the depth of so many pica m's; as five-line pica, six-line pica, &c. up to any size requisite.

Paragon, small pica, bourgeois, minion, &c. were formerly termed irregular bodies from their being intermediate sizes between the regular gradation. They were seldom introduced by the printer, from the apprehension he entertained that his office might be thrown into confusion in consequence of the slight difference which exists in those founts and others, in point of size. This difficulty disappeared as printing improved ; for now small pica and bourgeois are more generally used than any other letter, except pica, which is considered the standard size, as all leads are cast, and measures made to its m's. Its face is neither too small for the eye, nor its size too large, so as to extend a work unnecessarily. Minion is a letter become almost useless, except for newspapers, it being so nearly allied to brevier, a much neater type. Nonpareil and pearl have lately been much employed in miniature editions of some of our standard works, dictionaries and other books of reference, where it is desirable to have *multum in parvo*. They are introduced with much propriety and beauty in notes, quotations, arguments, &c. instead of brevier, to a bourgeois body. Diamond is only a pearl face upon a smaller body, and seldom used.

The primer is a size answering to two brevier bodies, There are likewise various other sizes cast for titles, which will appear in our specimen of different types.

The double pica may, with the greatest propriety, be termed an irregular letter, from its lining with two small picas. From what cause it acquired its present name will be difficult to say, unless it was originally cast to two lines of pica, and being judged too small a face for that size, was reduced to two lines of small pica. Mr. Caslon has cut a letter that may be properly called double pica.

Though all founders agree in one point, that is, in

casting letter to certain bodies, yet, in casting each body always to one and the same size, they very materially differ. This destructive deviation on the part of the founder is unpardonable. We are almost uncharitable enough to suppose, that it must have originated from avaricious motives—either to add to the weight of the letter, or to confine the printer exclusively to one foundry.

This evil has been represented to most of the letter-founders in its proper colours, and particularly to Messrs. Caslon and Catherwood, by the Editor, who acknowledge that this pernicious deviation, which was formerly so general among the founders, originated, most probably, in their negligence ; but, at the same time, by the desire of the printers, some of whom, from a love of singularity, and others to avoid the inconvenience of lending sorts, still order their founts to be cast to an irregular body. At present, however, much greater regularity prevails, and Messrs. Caslon and Catherwood, unless they have orders to the contrary, invariably cast their founts to a standard, which we shall insert, and which will be found to correspond in most respects with that of Mr. Moxon.

Few offices, of any extent, are without two or three founts of a particular size letter, cast by different founders. It often occurs, that a sort may be short in one, of which there is a superfluity in the other ; but, from their different face, &c. cannot be used together ; in this case, not only an expense is incurred, but a delay occasioned to the work from the time it necessarily takes to cast imperfections.

This is not the only inconvenience. In the best regulated offices, it is impossible to prevent founts from being mixed, which occasions loss of time to the compositor, who, if he be a careless man, will not take the trouble

to put the sorts in their proper places when marked in his proof, but will commit them to the old metal box, for the benefit of the founder, to the serious injury of the printer.

Another, and very considerable fault, may be alleged against the founders, who seem to have neglected, in their zeal to produce beautiful specimens, that exactness as to the depth of their types, which is so essentially necessary. We lately witnessed, in a fount of new letter, where a particular sort was run down the side of the same number of lines in the body, a variation of at least one-third of its own depth. This is fatal to table-work, as it entirely destroys that nicety so requisite in justification.

The size for each body of letter was fixed, and unalterably observed, by our own former letter-founders, otherwise the ingenious author of *Mechanic Exercises* would not have given us a table of the sizes of letter in *his* time, without reservation. In order to see the difference between the depth of letter in Mr. Moxon's time, and that which is cast at present, we shall insert this author's table of sizes, in which he has carried the number of m's, or (which amounts to the same thing) lines of matter of each body of letter, to the length of 12 inches, or a foot; which we shall observe in our counter-table.

Pearl	184
Nonpareil	150
Brevier	112
Long Primer	92
Pica	75
English	66
Great Primer	50
Double Pica	38
Two-line English	33
French Canon	17 $\frac{1}{2}$

These are all the bodies of letter noticed by the above author, from which it appears that, in his time, printers were not encumbered with so many different founts as at present. We have nine sorts of letter more than are mentioned in the preceding table, which, if they had then existed, Mr. Moxon would not have failed to mention, as he does small pica, concerning which he says, "We have one body more, which is sometimes used in England, that is, a small pica; but I account it no discretion in a master printer to provide it, because it differs so little from the pica, that, unless the workmen be carefuler than they sometimes are, it may be mingled with the pica, and so the beauty of both may be spoiled." Hence we may gather former opinions on irregular-bodied letter, the only one, small pica, being considered unworthy a place in the table of founts. Yet so changeable is taste with the times, that those founts termed irregular are now in more constant use than the others.

We shall compare the depth of the nine additional sorts of letter, proportionable to the sizes in the foregoing table, and then give the sizes of all the bodies of letter which are now extant.

Diamond, two lines of which will answer to the depth of one burgeois, would require, according to Mr. Moxon, 200 m's, or lines, to the length of one foot.

Minion, which has English for its two-line letter, would have required 132 m's.

Burgois, which has great primer for its two-line letter, would have required 100 m's.

Small pica	76
Primer	56
Paragon	46
Two-line pica	37 $\frac{1}{2}$
Two-line great primer	25
Two-line double pica	19

Thus would the sizes of these nine sorts of letter have run, had they been cast 118 years ago. Having reduced them to the standard which they held at that time, the following counter-table will shew how far our present sizes of letter differ from the former.

A table of the present sizes of letter, as cast in Caslon and Catherwood's foundry; with the number of m's contained in a foot.

Canon	18 and a great primer
Two-line double pica . .	20 $\frac{3}{4}$
Two-line great primer . .	25 $\frac{1}{2}$
Two-line English	32
Two-line pica	35
Double pica	41 $\frac{1}{2}$
Paragon	44 $\frac{1}{2}$
Great primer	51 $\frac{1}{4}$
English	64
Pica	71 $\frac{1}{2}$
Small Pica	83
Long primer	89
Burgois	102 $\frac{1}{4}$
Brevier	112 $\frac{1}{2}$
Minion	128
Nonpareil	143
Pearl	178
Diamond	205

The foregoing table is the standard by which the body of each letter should be regulated; and those who have deviated from it have little room to boast of their improvement in the art of printing. On the contrary, they have brought on it numerous evils, the reformation of which would be found equally beneficial to the founder and printer. The current founts might always be casting,

and ready when applied for—as well as the inconvenience done away of waiting for imperfections, at a time, perhaps, when they are urgently wanted. Another advantage would result, in the sale of a printing-office; for whatever type might be purchased, there would be no apprehension as to its standing with any other fount of the same kind which the purchaser might have had before.

It is highly probable, that the different sorts of irregular-bodied letters owe their existence to accident. A letter may have been cut, the face of which happened to prove too large for one, and too small for another, of the regular-bodied sizes; and therefore the expedient was used of making it an intermediate body; as, for instance, *paragon*, which turning out a handsome letter, was no doubt recommended as an improvement, and eagerly adopted.

In this country, moulds have been particularly cut for each of our irregular bodies. In France, their *la philosophie*, or small pica, is cast in the *Cicero*, or pica matrices; their *gaillarde*, or burgeois, in those of long primer; and their *mignone*, or minion, in those of brevier; so that the cutting of punches for three sorts of regular-bodied letter, serves there for as many of irregular body. This plan was attempted by Mr. Jalleson, a letter-founder from Germany, who lived in the Old Bailey, where he printed the greatest part of an Hebrew bible, with letter of his own casting, but was, by adverse fortune, obliged to finish the work in Holland. He had three sets of punches to cast six different bodies of letter—brevier and long primer from one set—pica and English from another—great primer and double pica from a third. He accordingly charged his brevier, pica, and great primer with as full a face as their respective bodies would admit

of; and, in order to make some alterations in the advancing founts, he designed to cut the ascending and descending letters to such a length as should shew the extent of their different bodies. But though he had cast founts of the three minor sorts of letter, he did not bring the rest to perfection.



CHAP. III.



*Of a Fount of Letter, considered as with Letter-
Founders.*

A FOUNT of letter is composed of the following sorts :

1. Capitals, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, Æ, Œ.
2. Small Capitals.
3. Lower Case, a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, &c.
4. Figures, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0.
5. Points, , ; : . ? ! - ' [] () * † ‡ § ¶.
6. Four sorts of spaces.
7. M and n quadrats.
8. Three sorts of large quadrats, two, three, and four m's.
9. Accents.

These are the ordinary sorts cast to a fount of letter, and which the founders divide into long, short, ascending, descending, and kerned letters.

Long letters are those which take up the whole depth of their bodies, and are both ascending and descending, such in the Roman, as Q and J ; but in the Italic, besides these capitals, *f* and *f* are long lower-case letters.

Short letters are all such as have their face cast on the middle of their square metal, and called by founders, shank, as, a, c, e, m, n, o, r, s, u, v, w, x, z, all which will admit of being bearded above and below their face, both in Roman and Italic.

Ascending letters are all the Roman and Italic capitals ; in the lower case, b, d, f, h, i, k, l, f, t.

Descending letters are g, j, p, q, y, in Roman and Italic. Ascending letters, in founts of the *old cut*, when they happen to stand under descending letters, are liable to be damaged ; to prevent which the compositor should vary his spaces.

Kerned letters are such as have part of their face hanging over either on one or both sides of their square metal or shank. In the Roman, f, j, f, are the only kerned letters ; but in the Italic, *d*, *g*, *j*, *l*, *y*, are kerned on one side, and *f* and *f* on both sides of their face.

The casting of those sorts is attended with considerable trouble, which accounts for the founders sending so few of them in a fount of letter, when in fact they require a larger number than their casting bill specifies ; their beaks being liable to accident, especially the Roman f, when at the end of a line. Kerned letters of the Italic, especially *f*, *g*, *j*, *f*, and *y*, are likewise subject to the same risk.

Most Italic capitals are kerned on one side of their face ; but none ought to be more attended to than A, T, V, W, that their angles may not fall upon an ascending letter, that may stand next to them.

The kerning of letters, it must be owned, may serve

many good purposes ; of which the following are not altogether undeserving notice :

1. In mathematical and algebraical works, where letters, figures, &c. are expressed according to the signification which they have either over or under them, and which might be put more safely over or under kerned characters, than be justified to them, which would render the composing of algebra more easy, and the work would have a more solid appearance.

2. In etymological dictionaries, the vowels, as well of large as of small capitals, might be kerned, to make room for the accent which governs the pronunciation of a word ; whereby the separation which the acute makes between each letter would be prevented.

3. In Hebrew, one alphabet kerned on one side, and another on both sides, with vowels cast in the nature of Greek accents, would make room for the proper vowels to be put under consonants more readily than by justifying them, in separate lines, to their places. But kerned letters will not afford proper room for vowels, and accents too ; and therefore the accents are justified over and under the respective places when their quality is expressed.

That some founders have been more liberal than others, in kerning letters, appears from the care they have shewn in preventing the Italic capital *A* from causing a gap, where it is preceded by a capital letter which is not kerned ; especially when it stands after a *P* ; from which the *A* separates itself more perceptibly than from any other letter. To forward their approaching each other, the *P* is kerned, that its propensity may cover the back of the protruding angle of *A*.

These are the classes into which the letter-founders divide the sorts of a fount, without including accented letters.

Of Double Letters.

Double letters were originally formed for the convenience of one kerned letter joining with another, as in the instance of a ff, fi, ft, &c. as their beaks would inevitably receive damage unless they were cast in one piece.

Of the number formerly used, few now remain, and those permitted only through necessity, as the fi, ff, fl, ffi, and ffl. The introduction of the round s, instead of the long, is an improvement in the art of printing, equal, if not superior, to any which has taken place of late years, and for which we are indebted to the ingenious Mr. Bell, who introduced them in his edition of the British Classics. They are now generally adopted, and the founders scarcely ever cast a long f to their founts, unless particularly ordered. Indeed, they omit it altogether in their specimens, wisely judging that the fewer ascending or descending letters are introduced, the more their types shew to advantage. They are placed in our list of sorts, not to recommend them, but because we may not be subject to blame from those of the old school, who are tenacious of deviating from custom, however antiquated, for giving a list which they might term imperfect.

Lord Stanhope, among his other improvements in printing, of which we shall have occasion to speak hereafter, has formed a scale for casting a fount of letter, differing completely from those of the regular founders, (a copy of which will be given in the Appendix): he abolishes altogether the double letters now in use, which he effects by cramping the beak of the f in such a manner as to permit any ascending letter to stand next to it; and introduces a number of other ligatures, which, it is asserted, will save much time to the compositor, from their more frequent use.

Judging from former times, when ligatures, such as *ra, ta, as, is, us, &c.* were used, and abolished because they encumbered the compositor, who, so far from thinking they expedited him in his work, took every opportunity of committing them to the old metal box, we much fear the Stanhopian introduction of *an, in, of, &c.* will not be found to meet with a much more favourable reception.

From every consideration of advantage to a master printer, we would advise the dispensing with every sort but what is really necessary, for this, though not the only reason—they cannot avoid having, at times, men in their employ who are careless in their business. The greater the number of boxes in a case, the more harbours there are for pie ; experience proves this daily ; and were those boxes, formerly used for double letters, reduced into the general size of the case, those depôts would be destroyed which contain, as all pie generally does, the most useful sorts—besides enlarging the case, and rendering it less complex to the learner.

The expense, likewise, in casting a fount of letter with such a number of heavy sorts will be considerable, when it is considered that the damaging of one letter is the destruction of two, and will operate very strongly in favour of what we have taken the liberty to suggest. With pleasure we allow our tribute of praise to his Lordship, for the attention he has paid to the improvement of the printing business, and sincerely hope his plan will be followed of abolishing those double letters that were attached to the *f*, though we wish it could have been carried into effect without encroaching so much on the beauty of the letter itself, its proportion being in a great measure destroyed.

*Of the Number of each Sort cast to a Bill of Pica,
Roman and Italic.*

This part of our work might be extended to a considerable length, were we to enter into the minutiae of the different sorts requisite to form a complete fount for every language printed in the Roman character; but as this would be carrying us beyond our limits, we shall confine ourselves to the improved scale of the present day, calculated for our own language, to which imperfections may be afterwards cast, so as to render the fount serviceable for any other. The Latin and French require more of c, i, l, m, p, q, s, u, and v, than the English; but until such sorts become really necessary, it would be useless to cast them. When a work is completed for which such sorts were serviceable, it may then be proper, to prevent their remaining inactive, to cast up to them—by which means the fount will receive considerable increase when employed again in the English language.

A perfect scale is of the greatest importance and utility, as it does away the necessity, in a great measure, of casting imperfections, which too often differ from the original fount, sometimes in thickness, in height, or depth, when cast in moulds of the same body, but not of the same cut. This is a serious evil, and particularly destructive to a fount of letter. It reflects discredit not only on the founder but the printer, in the opinion of those unacquainted with the profession, who consider every defect as an error of the press. A careful compositor has it in his power to detect those defects; but when it is considered that such discovery will, perhaps, retard him in the pursuit of his business, it cannot be a matter of

much surprise, that he should permit them to pass without observation. It should be an invariable rule with master printers to examine imperfections before they go into the hands of the compositor, that by timely precaution they may prevent not only the injury of their founts, but the destruction of that symmetry in the lining of the letter, so essential to the beauty of printing. Good press-work will immediately point out the most trivial defect in this respect.

The system of hurrying works through the press, lately adopted by some booksellers, by dividing them among a variety of houses, is a great enemy to uniformity. In some instances it must be allowed that expedition is absolutely necessary ; but care should be taken that the founts completely correspond. It is not unusual to discover, in volumes so divided, one to contain more lines in a page than another ; or, if the number of lines are the same, the page differs in length ;—or should the type agree in depth, it is more than probable that it varies in thickness ;—all which proclaim a glaring want of uniformity, without which the typographic art cannot be said to have arrived to a great degree of perfection.

But the complaint does not rest so much against dividing works by volumes, as by proportioning a single volume into more houses than one. Expedition can scarcely justify this practice, from the inconvenience arising, not only to the printer, but to the public. An instance lately occurred of a work so divided (a prayer book), where the first part was printed with long s's, and the last part with round, independent of other deviations ; this is a sufficient proof that the system is injurious ; and it is to be hoped, that this rage for extraordinary expedition will not long continue. But to return :

Letter founders call 3000 lower case m's a bill, and proportion all other sorts by them ; so that a whole bill of pica makes 500 lbs.—1500 m's, or half a bill, 250 lbs.

Formerly a fount of letter, weighing 500 lbs. was considered a good-sized fount ; but now, so much has printing increased, that double that weight barely acquires the appellation. We shall, however, give what is reckoned by the founders a regular bill, perfect in all its sorts—for though what is termed a common fount has neither small capitals, accented letters, nor Italic ; yet so rarely is a fount of the present day ordered without them, that we rather leave it to the option of the printer to omit them in this scale on giving his order, should he be so inclined, and proportion their weight to the other sorts, than not to present the bill in as complete a form as possible.

A Bill of Pica Roman, and Half a Bill of Italic, weighing 800 lbs.*

ROMAN.

a	8500	ff	400	,	4500	A	600	A	300
b	1600	fi	500	;	800	B	400	B	200
c	3000	fl	200	:	600	C	500	C	250
d	4400	ffl	100	.	2000	D	500	D	250
e	12000	ffi	150	-	1000	E	600	E	300
f	2500	æ	100	?	200	F	400	F	200
g	1700	œ	60	!	150	G	400	G	200
h	6400			'	700	H	400	H	200
i	8000		1510	†	100	I	800	I	400
j	400			†	100	J	300	J	150
k	800	à	200	*	100	K	300	K	150
l	4000	è	100	[	150	L	500	L	250
m	3000	ì	100		100	M	400	M	200
n	8000	ò	100	\$	100	N	400	N	200
o	8000	ù	100	(	300	O	400	O	200
p	1700	á	100	¶	60	P	400	P	200
q	500	é	250			Q	180	Q	90
r	6200	í	100		10,960	R	400	R	200
s	8000	ó	100			S	500	S	250
t	9000	ú	100	1	1300	T	650	T	326
u	3400	â	200	2	1200	U	300	U	150
v	1200	ê	200	3	1100	V	300	V	150
w	2000	î	100	4	1000	W	400	W	200
x	400	ô	100	5	1000	X	180	X	90
y	2000	û	100	6	1000	Y	300	Y	150
z	200	ä	100	7	1000	Z	80	Z	40
&	200	ë	100	8	1000	Æ	40	Æ	20
		ï	100	9	1000	Œ	30	Œ	15
	107,100	ö	100	0	1300				
		ü	100				10,660		5331
		ç	100		10,900				
			2550						

* This Bill does not include quadrats, which may be calculated at 80 lbs. different sizes.

ITALIC.

<i>a</i>	1700	<i>ff</i>	80	<i>á</i>	20	<i>A</i>	120	Spaces.		
<i>b</i>	320	<i>fi</i>	100	<i>ē</i>	50	<i>B</i>	80			
<i>c</i>	600	<i>fl</i>	40	<i>í</i>	20	<i>C</i>	100			
<i>d</i>	880	<i>ffl</i>	20	<i>ó</i>	20	<i>D</i>	100			
<i>e</i>	2400	<i>ffi</i>	30	<i>ú</i>	20	<i>E</i>	120		Thick	18000
<i>f</i>	500	<i>æ</i>	20	<i>à</i>	20	<i>F</i>	80		Mid.	12000
<i>g</i>	340	<i>œ</i>	12	<i>è</i>	20	<i>G</i>	80		Thin	8000
<i>h</i>	1280	—		<i>ì</i>	20	<i>H</i>	80		Hair	3000
<i>i</i>	1600		302	<i>ò</i>	20	<i>I</i>	160		m Qu.	2500
<i>j</i>	80	—		<i>ù</i>	20	<i>J</i>	60		n Qu.	5000
<i>k</i>	160	;	160	<i>á</i>	40	<i>K</i>	60		—	
<i>l</i>	800	:	120	<i>ē</i>	40	<i>L</i>	100			48,500
<i>m</i>	600	?	40	<i>í</i>	20	<i>M</i>	80			
<i>n</i>	1600	!	30	<i>ó</i>	20	<i>N</i>	80			
<i>o</i>	1600	(	60	<i>ú</i>	20	<i>O</i>	80			
<i>p</i>	340	—		<i>ä</i>	20	<i>P</i>	80			
<i>q</i>	100		410	<i>ë</i>	20	<i>Q</i>	36			
<i>r</i>	1240			<i>ï</i>	20	<i>R</i>	80			
<i>s</i>	1600			<i>ö</i>	20	<i>S</i>	100			
<i>t</i>	1800			<i>ü</i>	20	<i>T</i>	130			
<i>u</i>	680			—		<i>U</i>	60			
<i>v</i>	240			470		<i>V</i>	60			
<i>w</i>	400					<i>W</i>	80			
<i>x</i>	80					<i>X</i>	36			
<i>y</i>	400					<i>Y</i>	60			
<i>z</i>	40					<i>Z</i>	16			
©	40					<i>Æ</i>	8			
						<i>Œ</i>	6			
21,420						2132				

A plan has been suggested, and we believe acted upon by some master printers, in ordering a fount of letter—to desire a certain portion of it to be sent home complete—while the other part they reserve to be cast afterwards, as imperfections—by which means they are enabled to ascertain the state of their fount in an early stage, and make it perfect without going beyond the weight they originally intended, or incurring additional expense.

This mode carries with it strong grounds for recommendation ; but we shall leave it to the judgment of those who may think it worthy their attention, as we have not seen it carried into execution. We mention it, conceiving it essentially necessary, in a work of this nature, to let no observation pass unnoticed that may, in the remotest degree, be considered useful or important.

Printers divide a fount of letter into two classes.

- | | |
|-------------------|----------|
| 1. The upper case | } sorts. |
| 2. The lower case | |

The upper case sorts are capitals, small capitals, accented letters, figures, and references.

The lower case consists of small letters, double letters, points, spaces, quadrats, &c. each of which we shall treat of under distinct heads.

Of Capitals.

The use of capitals has been considerably abridged of late years ; and the antiquated method of using them with every substantive, and, sometimes, even with verbs and adverbs, is now discontinued, except in a few instances, such as Acts of Parliament, &c. They are considered, in the present day, as necessary only to distin-

guish proper names of persons, places, &c. There are however, some particular works, in which authors deem it essential to mark emphatical words with a capital; in such cases, and there can be no general rule to guide the compositor, we would recommend the author always to send his copy properly prepared in this particular, to the printer, or he will become liable to the charge the compositor is allowed to make for his loss of time in following his alterations. The method of denoting a capital, or words of capital letters in manuscript, is by underscoring it with three distinct lines.

Capitals, of whatever body, if they are well proportioned, look well in titles, inscriptions, &c. but it requires taste and judgment in the compositor to display them to advantage.

The mode of spacing lines set in capitals is now laid aside: in some particular instances it may be necessary, in order to prevent two lines from being the same length in a title-page.

Of Small Capitals.

Small capitals are, in general, only cast to Roman founts, and are used for the purpose of giving a stronger emphasis to a word than can be conveyed to it by its being in Italic.

They are likewise used for running heads, heads of chapters, &c. instead of Italic, according to the fancy of the printer.—The first word of every section, or chapter, is generally put in small capitals, after a small, neat cock-up letter. They are likewise of considerable service in the display of a title-page, particularly in setting the catch lines.

The small capitals c, o, s, v, w, x, z, so closely resemble the same letters in the lower case, as to require particular care to prevent their mixing, as the difference can only be ascertained by their being cast thicker than the others.

In manuscript, small capitals are denoted by having two lines drawn under them.

Of Accented Letters.

Those which are called accented by printers, are the five vowels, marked either with an

Acute,	á é í ó ú
Grave,	à è ì ò ù
Circumflex,	â ê î ô û
Diæresis,	ä ë ï ö ü
Long,	ā ē ī ō ū
Short,	ă ě ĭ ǒ ŭ

Those who call accented letters all that are of a particular signification, on account of being distinguished by marks, reckon the French ç, the Spanish ñ, and the Welch ŵ and ŷ, in the class of accented letters, though not vowels. As the longs and shorts are used only in particular works, they are not cast to a fount of letter, unless ordered.

Of Vowels marked with an Acute.

The five vowels marked with acutes over them, it is probable, were first contrived to assist the ignorant monks in reading the church service, that by this means they

might arrive to a proper and settled pronunciation in the discharge of their sacerdotal functions ; and, by accenting the vowels afterwards in printed books, instruct others to conform to them in giving words their proper sound ; which, though it seems to be an ancient institution, is still observed in France where the vowels in the Latin columns of their common prayer-books are accented, in order to support an uniformity in the pronunciation. Some of our English etymologists have adopted the same method in their dictionaries, by placing an accent over, or next to the vowel which governs the sound and pronunciation of a word ; but as authors differ in this point, it will be difficult to accomplish their design, unless they can first agree to uniformity in accenting, and afterwards find out an expedient to establish their joint conclusion. The French have done this most effectually, by accenting the Latin in their mass-books, as the most proper vehicle to make the pronunciation of the Roman church-language more universal—an instance not unworthy of imitation, in other nations. How essentially would such a plan of accenting enhance the beauty and sublimity of the church service, which is too frequently mangled and mutilated by inaccurate and injudicious readers.

Among the acuted vowels, the *é* is the most considerable with the French, by whom it is used and abused according to the fancy of the writer, though it is confined to rules as well as other letters ; of which the following are the most general.

Where it sounds open and clear, at the end of words, as in *bonté, santé, piété*.

Where it sounds sharp, and the voice is to be raised, as in *prédecesseur, prédestiné*.

In adjectives or participles of the feminine gender, which end in two e's, as *une maison bien réglée*.

In preterits of the first conjugation, as, *j'ai pens  , j'ai aim  , j'ai desir  *.

Where it takes off the sound of the s after it, as in *  chevin,   caille,   carter, t  moigner*, instead of writing *eschevin, escaille, escarter, tesmoigner*; which is become obsolete.

Thus we find, that besides the e, acuted letters are of no use in French orthography; and none of them in the English, save that the acuted   ,   ,   , may, upon occasion, serve in etymological dictionaries among small capitals, and save kerning them; which, however, cannot be done to A and E. Those *must* be kernalled, or otherwise cut and cast, with an accent over them, on purpose, unless it is thought passable to put the accent at the side of a vowel; in which case the former ought to be very thin, especially if small capitals are cast to bear off each other.

Of Vowels marked with a Grave.

The a marked with a grave is used in several other languages besides the Latin and French, though we shall confine ourselves to these two, as being the principal languages which prove beneficial to our English presses. The a with a grave is used, in Latin,

When it stands for a word by itself, as *   patre,    matre*.

In adverbs, to distinguish them from adjectives, or prepositions of the same termination, as *infra, supra*, adverbs—*infra, supra*, prepositions.

   has a grave when it stands for a word by itself, as *redit    schol  *.

  ,   ,   , have a grave to distinguish adverbs and con-

junctions from adjectives and prepositions of the same termination, as *doctè, meritò, adversùs, secundùm*, adverbs—*docte, merito, adversus, secundus, secunda, secundum*, adjectives—*verò*, conjunction; *vero*, adjective.

In French,

a has a grave in *là*, when it is an adverb, as *il est logé là*. But *la* has no grave when it denotes the article of the feminine gender; as *la femme, la sœur*.

a has a grave when it is a particle before the dative case, as *j'ai donné à Mr. il a dit à Mr.*

Also, when it stands before the infinitive mood, as *facile à faire, propre à manger*.

Likewise, when it stands before the names of places, as *il est allé à Paris, il s'en va à Lyons*.

a has a grave in the word *voilà*.

But *a* has no grave where it comes after a *y*, as *il y a un Dieu, il y a des hommes savans*.

Neither has *a* a grave when it makes a word of itself, but at the same time derives from the verb *avoir*, to have; as *il a bon tems à se promener*, where the first *a* is not accented, because it derives from *avoir*; whereas the other *a* has a grave, because it stands before the infinitive mood.

The *e* has a grave in words whose last syllable has an open and sharp sound, as in *excès, procès, succès, exprès*, and the preposition *dès*, to distinguish it from *des*, which denotes the genitive of the plural number. But some put an acute in the above words, instead of a grave, and allow either to be right.

u has a grave in the word *où*, where it means *where*, as *où êtes vous ?*

But *u* has no grave when it stands for *or*, as *souhaitez-vous de boire du vin ou de la bière ?*

Neither has *u* a grave, when it stands for *either*, as *je*

partira ou pour Paris ou pour Dieppe—I shall go either to Paris or to Dieppe.

In English,

e is marked with a grave in poetry to prevent its being taken for the *e* feminine, which, not being sounded, would shorten the measure of the verse, were the *e* not marked to be pronounced ; as in these lines, viz.

Cithæron, Dindymè, in ashes mourn,
And Mycalè, and proud Olympus, shine.
Bœotia for her Dirce seeks in vain.

Of the Vowels marked with a Circumflex.

The circumflexed vowels are used in the French more than in the Latin language.

In Latin,

â and *û* are chiefly made use of.

a is circumflexed where it distinguishes the ablative from the nominative case, of the first declension, as nom. *musa*, abl. *musâ*, unless a preposition stands before it ; which shews the case without any other sign or distinction.

Also, where the preterperfect of the first conjugation is contracted, as *amâsti* for *amavisti*.

In French,

a is circumflexed where it retrenches the *s* after it, as *château*, *châtiment*, instead of formerly writing *chasteau*, *chastiment*.

e, *i*, *o*, *u*, are circumflexed where they have an *s* after them, which they shew to be cut off, by assuming a circumflex ; as does

ê in *fête*, *Evêque*, *être*, *êtes*, and many others.

i in *maître, épître, connoître, &c.*

ô in *Apôtre, côte, vôtre, &c.*

û in *brûler, coutume, couteau, soutenir, &c.*

But *s* maintains its place in *pasteur, gestes, distribuer, posterité*; and in all other words where the *s* after a vowel sounds clear and open; and where retrenching it would occasion a vitiated pronunciation.

Of the Vowels marked with a Diæresis.

The vowels which are marked with two dots, or a diæresis, over them, are properly but three, *ë, ï, ü*, though *ä* and *ö* ought not to be omitted in casting. Their use is, to separate one vowel from another, and to prevent their being taken for diphthongs: but the rules for placing the diæresis being as unsettled as many others relating to accented letters, we will not presume to fix upon any, but recommend it to authors to mark them in their copy, according to their own or their favourite grammarian's fancy, since it is not required of a compositor to concern himself about matters that are in dispute among pedagogues. In the mean time, particular care ought to be taken in poetical works not to omit putting the diæresis where the dividing of two vowels makes two different syllables; otherwise, two vowels together may be taken for a diphthong, and make the verse fall short of its measure, as might have happened to the lines underneath, had no diæreses been used to prevent it, viz.

The Swans that in Cäyster's waters burn.
In flames Caïcus, Peneus, Alpheus, roll'd.
The Tanaïs smokes amid his boiling wave.

Of Shorts and Longs.

Shorts as well as longs are invented to shew the accent, sound, and quantity of syllables. They are chiefly used in classical dictionaries, and in scanning of Latin verses, after their syllables have been brought into feet, and marked with shorts and longs according to the measure of the verse. Thus an adonic verse has two feet—A hexameter six—A pentameter five feet ; which consist either of two, or of three syllables. Two syllables, both long, are called a *spondee*—A foot, whose first syllable is long and the last short, is a *trochæus* ; and—Three syllables, viz. the first long and the other two short, is a *dactyle*.

Of the French ç, the Spanish ñ, and the Welch ŵ and ŷ.

The *c à la queue*, or *c with a tail*, is a French sort, and sounds like *ss*, when it stands before *a, o, u*, as in *ça, garçon* ; whereas a common *c*, before the *same* vowels, is pronounced like a *k*. To make a tail to a capital *C*, a figure of 5 inverted, and of a small size, is not improperly used, or a note of interrogation with the dot cut off.

The *n* marked with a stroke over it, is used in the Spanish, and pronounced like a double *n*, or rather like *ni* ; but short and quick, as in *España*. It is a sort which is used in the middle of words, but very rarely at the beginning.

In the Welch language, *ŵ* and *ŷ*, as well as the other circumflexed letters, are used either to direct the pro-

nunciation, as in *ynghŷdd*, in presence; *ynghŷd*, together: or else, for distinction sake, as, *mug*, a mug; *mŷg*, smoke; *hyd*, to, until; *hŷd*, length.

Having shewn, in as brief a manner as possible, the use made of accented letters, though we could have wished to have taken less notice of some, which are ranked among the obsolete sorts, invented by scholastics as signs and symbols, to impress upon their pupils the rudiments of grammar, we shall conclude by recommending to those authors who still maintain their necessity, in works designed for the learned, to be particular in sending their manuscript properly accented, according to their fancy—as the compositor should not deviate from his copy, or make alterations, without being paid for his loss of time.

Of Numeral Letters.

Numeral letters were used by the Romans to account by, and are seven in number, I V X L C D M. The reason for chusing these letters seems to be this: M being the first letter of *mille*, stands for 1000, which M was formerly written CIO. Half of that, viz. IO, or D, is 500.—C, the first letter of *centum*, stands for 100; which C was anciently writen L, and so, half of it will be 50, L.—X denotes 10, which is twice 5, made of two V's, one at top and the other at bottom.—V stands for 5, because their measure of five ounces was of that shape; and—I stands for 1, because it is made by one stroke of the pen.

If a less number stands before a greater, it is a rule that the less is *taken from* the greater; thus, 1 taken

from 5 remains 4. IV.—1 from 10 remains 9. IX.—10 from 50 remains 40. XL.—10 from 100 remains 90. XC.

If a less number follow a greater, it is a rule that the less is *added* to the greater; as, 5 and 1 make 6. VI.—10 and 1 make 11. XI.—50 and 10 make 60. LX. &c.

Sometimes small capitals are used for numerals, in the same manner as the seven sorts of capitals; and look neater than the last.

Numerical letters were not originally the invention of the Romans; several nations, anterior to them, used that method in counting. The ancient Romans employed capital letters; but when printing was discovered, and before capitals were invented, small letters served for numerals. At the time of printing with Gothic characters, *i v x l c d m* were, and are still, of the same signification with capitals, when used as numerals. But it should be observed, that the capital J is not a numeral letter, though the lower case *j* is as often and as significantly used as the vowel *i*, especially where the former is used as a closing letter, in *ij iij vj viij viij dcij*, &c. though it is as well not to use *j*'s at all, unless out of respect to antiquity: for in Roman lower case numerals, which are of a more modern date, the *j* is not regarded, but the *i* stands for a figure of 1, wherever it is used numerically.

Of Arithmetical Figures.

Arithmetical figures are nine in number, besides the cipher, or nought, which, though of itself of no signification, makes a great increase in the figure to which it is joined, either singly or progressively.

Figures require a founder's particular care to cast them exactly n-thick, and to a true parallel, as the least deviation, where a number of them come together in table-work, destroys their arrangement, and causes an inconvenience in the justification, which the ingenuity of a compositor cannot always, or without considerable loss of time, rectify.

The excellence of figures does not consist in their having soft and fine strokes, but rather in such circles and lines as bear a proportion with the strength of the face. The improvement which has recently taken place, and is now generally adopted, of casting them to a fuller face than formerly, must be allowed to add considerably to their appearance, and to the beauty of the work in which they may be used.

Printers at one time thought it a great impropriety to use erect figures in Italic matter, judging that the obliquity of that character would be intercepted by them, and therefore had figures cast of the same inclination; but this peculiarity is entirely laid aside in England, though it still prevails in some parts abroad.

Of Scratched Figures.

Though scratched figures are at present not used with us, yet, as their existence is not entirely done away, it might be construed an omission were we not to notice them, and specify in what particular they were formerly thought of utility.

They were used in that species of arithmetic called division, and are still considered in Germany, and other foreign parts, as essentially necessary; the dividing and

divided figures being scratched as soon as they have been adjusted by subtraction and multiplication.

Having made some observations upon the numeral letters of the Romans, and on modern arithmetical figures, we will shew the manner adopted by the Greeks and Hebrews of numerating in their characters, as well for the satisfaction of the curious, as for the instruction of those who may have occasion to become acquainted with them.

Of Greek Numerals.

Instead of seven letters used by the Romans, the Greeks employed their whole alphabet, and more than the alphabet; for they contrived three symbols more, and made their numerals to consist of twenty-seven sorts, which they divided into three classes; the first, to contain units—the second, tens; and the third, hundreds. Accordingly the first class consists of the nine following numerals, viz.

α	β	γ	δ	ϵ	ς	ζ	η	θ
1	2	3	4	5	6	7	8	9

In this class, it may be observed, the Greek *stigma*, or *Stigma*, is made an auxiliary numeral letter, to stand for 6, and is called *ἐπίσημον*.

The second class includes the nine numerals which express tens, viz.

ι	κ	λ	μ	ν	ξ	$\omicron$	π	ζ
10	20	30	40	50	60	70	80	90

In this second class, a particular symbol, resembling much an inverted Hebrew *lamed*, serves to express 90 though others use an *eta* in the room of it, to which, as well as the former, they give the name of *koppa*.

The third class contains the numerals which carry hundreds with them, and are

ϵ	σ	τ	υ	ϕ	χ	ψ	ω	$\pi\varsigma$
100	200	300	400	500	600	700	800	900

In this class the additional symbol which stands for 900 is a compound of a *pi* and a *sigma*, for which reason it is called *sanpi*; though others represent it by a mark like this, Θ .

To raise numbers to thousands, nothing else is required than to begin the alphabet again, and to mark each letter with a dot, or an acute under it, in the following manner:

1000	2000	3000	6000	10,000	100,000
α'	β'	γ'	ζ'	ι'	ξ'

Still higher numbers are noted with double acutes under them; thus,

1,000000	2,000000	3,000000, &c.
α''	β''	γ''

The manner of joining these numerals may be learned from the following example:

11	23	104	1005	1754
$\iota\alpha$	$\kappa\gamma$	$\epsilon\delta$	$\alpha\epsilon$	$\alpha\psi\nu\delta$

Besides the above manner of counting by lower-case letters, the Greeks make choice of six capitals, to express sums by,

I	II	Δ	H	X	M
1	5	10	100	1000	10,000

Among the numeral letters, the *pi* is peculiar, for admitting the *delta*, *eta*, *chi*, and *mu* into its centre, and for giving such an incorporated letter five times the value which it has of itself; as,

$\boxed{\Delta}$	5 times 10 are 50.
$\boxed{H}$	5 times 100 are 500.
$\boxed{X}$	5 times 1000 are 5000.
$\boxed{M}$	5 times 10,000 are 50,000.

To these inclosed numerals any part and quantity may be added, according to the value which is contained in each of the six numeral letters exhibited in the preceding page.

It should be observed, that when a numeral letter is marked at the top, it shews it to be a fraction ; as,

One-fourth.	One-fifth.	Five-eighths.
δ	ϵ	$\epsilon \eta \eta$

Of Hebrew Numerals.

The manner of counting by letters is derived from the Hebrews, who for that purpose made use of the letters of their alphabet, without the assistance of other symbols. Accordingly, the letters which express units, are,

ט	ח	ז	ו	ה	ד	ג	ב	א
9	8	7	6	5	4	3	2	1

The following contain tens, viz.

צ	פ	ע	ם	נ	מ	ל	כ	י
90	80	70	60	50	40	30	20	10

And these underneath, hundreds, viz.

ץ	ף	ז	ם	ך	ת	ש	ר	ק
900	800	700	600	500	400	300	200	100

In joining Hebrew letters for numbers, it is a rule to put the letter of a greater signification before a character of a less ; as,

יב	לא	צג	קה	רסו
12	31	93	105	266

The numeral signification of the five final letters is sometimes expressed by compounds ; as,

תתקכ"ה	תתקכ"ו	תתקכ"ז	תתקכ"ח	תתקכ"ט
500	600	700	800	900

א with an acute over it, stands for 1000 : but where the contents of a sum amount to above 1000, the letter to the right hand shews the order of thousands, and the א is doubly accented ; thus,

ב"א	ג"א	ה"א
2000	3000	8000

And if hundreds are added to them, the double-accented א is omitted, and only a common letter put at the beginning, to intimate the order of thousands ; thus,

כק	דש	ות	זתש	חרג
2100	4300	6400	7700	8203

In printed books and letters the Jews date their years [after the creation of the world] without putting an ה at the beginning, to imply 5000, and only set down the hundreds, and parts, of which their years consist above the thousands. But in this case they seldom forget to put the letters לפק after the date ; which is to inform the reader, that the date thus abridged, is according to the minor supputation.

In writing 15, the Jews chuse to do it by טו, instead of יט, because these last letters are used in Jehovah ; and therefore they think it a profanation of the Lord's name, if the said letters should be used for numerals. Neither do they express 16 by יז, but make use of טז, because the

two letters, jod and vau, are likewise comprehended in the word Jehovah.

Of References.

References are those marks, or signs, which are used in a work with side or bottom notes, to direct the reader to the observations they may contain on that part of the text to which the reference may be attached, the note having a corresponding reference.

They are variously represented ; those generally in use are the

Asterisk	*	Section	§
Dagger	†	Parallel	
Double Dagger	‡	Paragraph	¶

In works where the notes are numerous, superior figures are used, as doubling the common references frequently causes confusion. Italic lower-case letters, between parentheses, are frequently used for references, beginning with (*a*), and so on to the end of the alphabet.

The Asterisk, the principal of the references, is used in the Roman church-books, to divide each verse of a psalm, and shew where the responses begin, which in our Common Prayer Book is denoted by a colon. It is sometimes used to supply the name of an anonymous person, in satirical or libellous works. The metal rule is also much used in the same way. It is likewise used to denote an omission, or a hiatus, by loss of original copy, in which case the asterisks are multiplied according to the extent of the chasm.

The Dagger, originally termed the Obelisk, or Long Cross, is frequently used in Roman-catholic church-books, in prayers of exorcism, at the benediction of bread,

water, fruit, and upon other occasions, where the priest makes the sign of the cross. But it must be observed, that it is not used in the above books unless for want of square crosses, which are the proper symbols ; and are used also in the Pope's briefs, and in ordinances and mandates of archbishops and bishops, who put it immediately before the signature of their names. But the square cross is not reckoned among references of which we are speaking.

The Long Cross, or Dagger, is used in genealogical tables, and works of that description, where it denotes the death of a person, or the extinction of a family. Sometimes it serves for a signature to matter which has been either omitted, or else added ; and which is intercalated after the omission ; but its principal use is by way of reference.

The Double Dagger and Parallel, are considered only as references.

The Section is seldom employed now but as a reference, except in Latin notes, collected from foreign books, which generally abound with citations.

The Paragraph is less used of any of the references, in consequence of its heavy appearance ; and, except in old bibles, where it was placed to denote the changing of the contents of a chapter, or in common prayer books, to direct the order of the service, and which is called the Rubric, as those lines were formerly printed in red, we may consider it as nearly abolished.

From the foregoing observations it is evident, that the symbols, noticed here as references, were designed for other and distinct purposes. It would not be one of the least improvements were other marks devised to supply their place, of a more elegant shape ; the superior letters and figures have a neater appearance, could they be kept clear from picks in the working.

For the information of young beginners, it may be proper to observe, that there are a few other sorts contained in the upper-case, from motives of convenience, which cannot with propriety be considered under the head of upper-case sorts—the k, for instance, is not called an upper-case k, but to distinguish it is generally termed the little k. The fb, fk, and ft, where long s's are in use, hold their places in the upper-case.

OF LOWER-CASE SORTS.

Having already considered the lower-case alphabet, it will be unnecessary to dwell long on this head, we shall therefore merely notice those sorts which have not been already treated on. Those termed lower-case sorts are, the small letters of the alphabet, double letters, points, the crotchet and parenthesis, spaces and quadrats. Of these i, v, x, l, c, are numeral letters, and are generally used in notes; the d, or m, seldom appear in lower-case numerals, though their power is not inferior in calculation to capitals, as they are governed by the same rules.

Of Points.

They consist of a comma, semicolon, colon, period or full-point, note of interrogation and note of admiration.

Points are not of equal antiquity with printing, though, not long after its invention, the necessity of introducing stops, or pauses in sentences, for the guidance of the reader, brought forward the colon and full-point, the two first invented. In process of time the comma was added

to the infant punctuation, which then had no other figure than a perpendicular line, proportionable to the body of the letter; these three points were the only ones used till the close of the fifteenth century, when Aldus Manutius, a man eminent for the restoration of learning, among other improvements in the art of printing, corrected and enlarged the punctuation, by giving a better shape to the comma, adding the semicolon, and assigning to the former points more proper places; the comma denoting the smaller pause, the semicolon next, then the colon, and the full-point terminating the sentence. The notes of interrogation and admiration were not introduced till many years after.

These points are allowed to answer all the purposes of punctuation, though some pedantic persons have suggested the propriety of increasing them, by having one below the comma, and another between the comma and semicolon. So far are we from imagining that such an introduction will meet with encouragement, that we confidently expect to see the present number diminished, by the total exclusion of the colon, a point long since considered unnecessary, and now but seldom used.

Perhaps there never existed on any subject, among men of learning, a greater difference of opinion than on the true mode of punctuation, and scarcely can any two people be brought to agree in the same method; some making the pause of a semicolon, where the sense will only bear a comma; some contending for what is termed stiff pointing, and others altogether the reverse.

The want of an established rule in this particular is much to be regretted. The loss of time to a compositor, occasioned, often through whim or caprice, in altering points unnecessarily, is one of the greatest hardships he has to complain of in his profession.

Scarcely nine works out of ten are sent properly prepared to the press; either the writing is illegible, the spelling incorrect, or the punctuation defective. The compositor has often to read sentences of his copy more than once before he can ascertain what he conceives the meaning of the author, that he may not deviate from him in the punctuation; this retards him considerably. But here it does not end—he, and the corrector of the press, though, perhaps, both intelligent and judicious men, differ in that in which few are found to agree, and the compositor has to follow either his whim or better opinion. The proof goes to the author—he dissents from them both, and makes those alterations in print, which ought to have rendered his manuscript copy correct.

Some compositors do not possess so perfect a knowledge of punctuation as others; to such the hardship becomes greater; the loss of time to them will be very considerable. The author should, in the first instance, send his copy properly prepared to the press. He must be the most competent judge of the length and strength of his own sentence, which the introduction of a point from another might materially alter, a circumstance not uncommon, as instances have occurred where a single point has completely reversed the meaning of a sentence.

The late Dr. Hunter, in reviewing a work, had occasion to censure it for its improper punctuation. He advises authors to leave the pointing entirely to the printers, as from their constant practice they must have acquired a uniform mode of punctuation. We are decidedly of this opinion; for unless the author will take the responsibility of the pointing entirely on himself, it will be to the advantage of the compositor, and attended with less loss of time, not to meet with a single point in his copy, unless to terminate a sentence, than to have his mind confused

by commas and semicolons placed indiscriminately, in the hurry of writing, without any regard to propriety. The author may reserve to himself his particular mode of punctuation, by directing the printer to point his work either loosely or not, and still have the opportunity of detecting in his proofs whether a misplaced point injures his sentence. The advantage resulting from this method would ensure uniformity to the work, and remove in part from the compositor, a burthen which has created no small degree of contention.

Having considered it our duty to enter thus fully on a subject that so materially concerns the compositor, we will proceed to the points themselves; not with the view of laying down any rule, which we conceive impracticable, but for the purpose of explaining each in its proper order. An uniform and correct mode of pointing must be acquired by the compositor from practice and attention.

The comma, which is considered the first, from its requiring the shortest pause, its time being till you can reckon one, is more frequently used and misapplied than any of the other points. Its unnecessary introduction often involves the reader in perplexity; and its omission blends sentences that should be kept distinct—and in unskilful hands, may pervert the meaning of the author, and render it ridiculous. The most acceptable mode seems to be what is termed *easy pointing*, which certainly has the advantage of not confusing the reader.

The comma, having the first place in every sentence, though, strictly speaking, it may be considered a junior stop, governs the order of all the others; therefore the

ready way to uniform pointing is to acquire a perfect knowledge of this key to punctuation.

Commas are used to denote extracts or quotations from other works, in dialogue matter, or any passages or expressions not original, by inverting two of them, and placing them before the passage quoted, and closing such passage with two apostrophes. These are termed inverted commas ; and when used, a thick space is sufficient to keep them free from the matter. The method of running them down the sides to the end of the quotation, has been found inconvenient, particularly where a quotation occurs within a quotation, or a speech within a speech ; the proper method of distinguishing which is, by placing a single inverted comma, and running one down the side till such extra quotation is concluded, which cannot well be done when the double commas are also run down. Such extra quotation to be concluded with a single apostrophe ; or should both quotations close together, put three apostrophes, observing after the first to place a thin space.

Inverted commas owe their origin to Mons. Guillemet, a Frenchman, who, it may be supposed, was no friend to *Italic*, they being intended to supersede the use of that letter. As an acknowledgment for this improvement, his countrymen call them after his name.

A single comma inverted is used as an abbreviation to the word *Mac*, as in the instance of M'Gowan.

The semicolon is allowed double the space of time for its pause to the comma, and may be considered an important point in punctuation ; it enforces what has been illustrated by the comma, and allows the reader an opportunity to acquire a perfect view of the sentence, before it is terminated by the full point.

The colon, whose allowed time is till the reader can count three, has been superseded in almost every instance, either by the semicolon, ellipsis line, or metal rule, and in some cases by the comma; neither is its utility in figure-work any longer acknowledged.

The full point is used to terminate a sentence, and its pause is double the time allowed to the semicolon. It is also used in abbreviations, but then loses its effect as a full stop in the punctuation, unless at the end of a sentence. Some authors, enemies to the introduction of many points, will even omit the semicolon after an abbreviation, leaving the full point an indefinite pause to the discretion of the reader.

Full points are sometimes used as leaders in tables of contents, figure-work, &c. but dotted rules are much better for this purpose, from their uniform appearance, as they not only supply the place of full points and quadrats, but save considerable time in the composition.

The pause for a note of interrogation is rather longer than that allowed to the full point.

The note of admiration, or exclamation, is placed wherever surprise, rapture, &c. are expressed.

Exclamations are sometimes mistaken for interrogations, and *vice versa*; care should, therefore, be taken in examining to which of these two variations the one or the other inclines.

All the points, except the comma and the full stop, have a hair space placed between them and the matter, to distinguish them; the comma and full point, not lining with the depth of the face of the letter, do not require any space to bear them off.

The m-metal rule, though it cannot be denominated

a point, is frequently used in peculiar works; sometimes as a substitute for the comma, at others for the colon; and is found particularly serviceable in rhapsodical writing, where half sentences frequently occur.

Of the Hyphen, or Division.

To divide words or syllables with propriety is an important part of a compositor's business. It will exercise his judgment, and demands particular attention, as authors must leave the use of the hyphen to the discretion of the printer.

The difficulty that formerly existed as to the proper method of dividing syllables, arose from the controversies in which authors were continually engaged on the subject of orthography. Without being able to establish a criterion, each arrogated to himself the adoption of his own particular mode, to the subversion of uniformity and propriety.

The dictionary of Dr. Johnson is now looked up to as the highest authority, and the labour of that great man seems to be crowned with complete success. It has silenced those pedantic clamours, and divided opinions, which distracted the attention of the compositor, and he is now able to solve any difficulty, by a reference to this excellent standard of English orthography. Authors of the present day seldom interfere with what is now deemed the province of the printer: they will generally allow him, from his practice, to be a pretty

competent judge of orthography, and therefore not object to his mode of spelling, though it may vary from their own. To the compositor this is an advantage of considerable importance, as it allows him to observe a system in his spelling, and enables him, at the same time, to acquire the proper use of the division, in which he should be careful not to suffer a syllable of a single letter to be put at the end of a line, as *a-bide*, *e-normous*, *o-bedient*, &c. except in marginal notes, which, from their narrow measure, cannot be governed by this rule. The terminating syllable of a word should not be allowed to begin a line, as *ed*, &c. the hyphen being the thickness of one of the letters, the measure must, therefore, be very narrow, or the line very closely spaced, that will not admit the other. A compositor, who studies propriety and neatness in his work, will not suffer an unnecessary division, even in a narrow measure, if he can avoid it by the trouble of over-running two or three lines of his matter.

In large type and narrow measures, the use of the division may admit of an excuse; but, in that case, care should be taken that they do not follow each other. In small type and wide measures, the hyphen may generally be dispensed with, either by driving out or getting in the word, without the least infringement on the regularity of the spacing. The habit once acquired of attending to this essential point, the compositor would find his advantage in the preference given to his work, and the respect attached to his character, from his being considered a competent and careful master of his business. The appearance of many divisions down the side of a page, and irregular spacing, are the two greatest defects in printing.

It is proper, if possible, to keep the derivative, or radical word, entire and undivided; as *occur-rence*, *gentle-man*, *respect-ful*, &c.

The hyphen, or division, is likewise used to join two or three words together, which are termed compounds, and consist frequently of two substantives, as *bird-cage*, *love-letter*, &c.; likewise what are termed compound adjectives, as *well-built house*, *handsome-faced child*, &c. But compounds are sometimes made of words that were never intended for such; therefore, to acquire a competent knowledge of them, does not depend upon fancy, but exercises the judgment in discovering the rise and fall of the tone, which is an adjunct; and whether that and the preceding appellative may not be joined into one word, rather than make a compound of it.

The prepositions *after*, *before*, *over*, &c. are often connected with other words, but do not always make a proper compound; thus *before-mentioned* is a compound when it precedes a substantive, as, in the *before-mentioned* place; but when it comes after a noun, as in the place *before mentioned*, it should be two distinct words.

Divisions are sometimes used in table-work, indexes, or contents; but, like the full point, they are now generally superseded by dotted rules; for they will not always come off clear, and frequently cut the paper, unless worked with care.

Divisions should not be cast of too thick a body; their principal use is in justifying and correcting, therefore they cannot be too thin to be serviceable: they do not require a very bold stroke, except for spelling-books, for which they are generally cast on purpose.

*Of the two Signs of Intercalation, the Parenthesis
and Crotchet.*

The use of the parenthesis is to inclose such words or sentences of a period as make no part of the subject, yet at the same time strengthen the argument; which, however, would read smoothly on were the enclosed matter taken away.

Parentheses are not now so generally used as formerly: authors place their intercalations between commas, which make them equally as intelligible as though they were inclosed between parentheses, and look much neater in print; but where parentheses are used, should a point be requisite to mark the sentence, it is placed after the parenthesis, the intercalation not being reckoned any part of that sentence; as, for instance, *My Lord (said I), I will tell your Lordship, &c.*

Crotchets are so seldom made use of now, that they require little notice: both parentheses and crotchets were formerly used to inclose folios, &c.; but the modern method of putting folios in full-faced figures, unattended, leaves the crotchet scarce a duty to perform.

Of the Apostrophe.

The apostrophe is called a sign of abbreviation, its appearance often ejecting some letter or letters from the word to which it is attached, particularly in poetry, where it often contracts two syllables into one, to give a verse its proper measure; to this the vowel e yields

oftener than any other letter, as *alleg'd, chang'd, &c.* Sometimes it cuts off a vowel at the beginning of words, as *'bate, 'scape, 'squire, &c.*; sometimes a syllable, as *'prentice*; but these, and many other abbreviations, are common only in poetical works, and are under the arbitration of the author, who best knows where such contractions serve his purpose.

The monosyllables *tho'* and *thro'* are sometimes shortened, but without any appearance of propriety to justify the curtailment, as they retain the same sound, and therefore the apostrophe cannot assist the versification.

The genitive case of the singular number is generally known by having *'s* for its termination.

All quotations, which are denoted by beginning with inverted commas, are closed with apostrophes. There is no space required between the apostrophe and the matter.

Of Quadrats.

An m-quadrat is the square of the letter to whatever fount it may belong; an n-quadrat is half that size. In the casting of m and n-quadrats, the utmost exactness is necessary; they require also in dressing particular care, for the most trifling variation is instantly discovered, when ranged in figure-work, for which purpose they are much used; and unless true in their justification, the arrangement is confused to such a degree, that, all the pains and ingenuity of a compositor cannot rectify it. The same observation holds good with respect to figures.

M-quadrats always begin a paragraph, by indenting the first line ; it is likewise the proper space after a full-point, when it terminates a sentence in a paragraph.

N-quadrats are generally used after the comma, semi-colon, &c. and sometimes after a curved letter ; but the use of the n-quadrat in spacing must be guided by circumstances.

Two-m, three-m, and four-m quadrats, are likewise cast for break lines and white lines, but particularly for poetry, for which purpose they require to be as exact in their depth as the m or n-quadrat, or the matter will stand uneven where a number of them come together.

The inconvenience arising from founts of the same body not agreeing in depth is great, where the quadrats, through necessity, are sometimes mixed. It is a serious evil, and much to be deplored, that some method cannot be adopted to check it. A particular work will sometimes require more quadrats than were originally cast to the letter it is done in—recourse is had to the founder, though at the time there may be a sufficiency of the same body, but a different fount, in the house, which do not exactly range, and cannot be used. The printer is thus put to unnecessary expense, and, even then, it is a hundred chances to one if they do not get mixed. When they are afterwards used for ranging matter, this defect will occasion much trouble and loss of time. This is but a trifling inconvenience, compared with others, some of which we have before noticed. It is astonishing that a system so destructive and irregular should be permitted.

Riglets, of the same body with the letter of the work, are sometimes used instead of quadrats, for white lines ; but, from being often wetted, are apt to swell, and cannot be depended on ; it would be better, therefore,

to use space leads, which are cast from 4, 6, and 8 to a pica, and from 4 m's to any length required.

Of Spaces.

The use of spaces is to separate one word from another, so that the reading may appear easy and distinct. To enable the compositor to space even, and to justify with nicety, they are cast to various thicknesses.

Five to an m—or five thin spaces
Four to an m—or four middling spaces
Three to an m—or three thick spaces
And two to an m—or two n-quadrats,

which may with propriety be reckoned among the number of spaces, since they are used in the matter with the spaces. Besides these, there are what are called hair spaces, cast remarkably thin, and found particularly useful in justifying lines and assisting uniformity in spacing.

CHAP. IV.

*Of Rules.*

RULES are either brass, metal, or space rules ; the first are made by printers' smiths and joiners, and the other two cast by letter-founders.

Brass rules ought to be exactly letter-high : if therefore founts differ in height to paper, from the regular standard, those rules, accurately made, are rendered useless : for, if they are higher than the letter, they come off black and broad ; and, besides hindering the adjoining letters from appearing, they cut both paper and tympan. On the other hand, if they are lower than the letter, they do not appear at all, especially if they are thin, and stand between matter without scaleboard at their sides ; which, though (in particular cases) they may be left out in Roman letter ; yet in mixt matter, or Italic, a scaleboard at least is required before and after a thin brass rule, to prevent its touching upon *d, f, l*, at the fore-side, and upon *f, g, j, p, s, y*, at the hind-side.

Brass rules being commonly cut to the length of sixteen inches, their equality, as to height, from end to end, is not always to be depended on, and therefore should be tried ; which is done by holding the foot, and afterwards the face-side of the whole length upon an even imposing stone, and observing whether light can be discovered beyond the rule and the stone, which, if it appears, proves the rule faulty, and shews where it drives out in height, and occasions a hollowness in some other place.

The face of rules ought also to be attended to, that it may be of an equal bold, or else tender look, according to the size of the letter or figures with which they are used. But a great difference appears in this particular, when we find it necessary to piece them ; a compositor, therefore, when he is driven to this necessity, should endeavour to dress the shorter pieces, so as they may appear as one length.

The thickness of rules for table-work should be proportionable to their face, without so much shoulder as shall hinder a cross rule from joining a perpendicular line ; since it is a maxim, “ That rules (in table-work) shall fall upon and touch rules ;” which, if it is followed, has a good effect,

Of Metal Rules.

Metal rules, like quadrats, are cast to m's, from the size of one to four, sometimes six m's, and are used in schemes of accounts, to direct and connect each article with its summary contents, where they stand opposite, and distant from each other.

Metal rules, sometimes, stand for *noughts*, in columns of figures, where the rule should not exceed the extent which figures require. Thus, in a column of four n's, a two-m rule is answerable to them; and where the numeral contents of a column do not amount to above hundreds, a single m rule will answer.

Metal rules made to line and join accurately, are very useful, as they serve not only for rectilinear, but also perpendicular progressions, where no other rules are to touch them. But though they have shouldering sufficient to bear off the matter, they require nevertheless a scaleboard, or, if it will admit, a riglet before and after them, that they may run straight, and meet with nothing that can throw them out of line.

Sometimes a rule stands for a sign of repetition, in catalogues of goods, where it implies *ditto*; and in catalogues of books, where a rule signifies *ejusdem*, instead of repeating an author's name, with the title of every separate treatise of his writing: but it must be observed, that no sign of repetition, more than *ditto*, *ejusdem*, or *idem*, must be used at the top of a page; but that the name of the author, or merchandize, must be set out again at length; and if their series continues, to denote the continuation thereof, at every article, by a rule of three or four m's, so as to range, instead of extending the rule to the different lengths of names.

A metal rule likewise stands for *to*, or *till*; as, chap. xvi. 3—17. that is, from the third to the seventeenth verse. At other times, it serves for an index, to give notice, that what follows it is a corollary of what has preceded; or otherwise matter of import and consequence.

Of Space Rules.

Space rules are not always of the same thickness, though two of them generally answer to the depth of a pearl body. But this is not of so much moment as their being of a neat look, and made to join well; in which case they may be considered valuable sorts. They may be cast to various widths, from one m to six, to whatever body ordered, and are, in intricate rule work, from their joining more exact, neater than brass rule, less expensive, and more convenient to the compositor.

Care should be taken that the brass rule be the thickness of the space rule, for the convenience of lining.

Of Braces.

Braces are used chiefly in tables of accounts, and similar matter, that consists of a variety of articles, which would require much circumlocution, were it not for the method of tabular writing, which is practised in England to greater perfection than in any other nation.

Braces stand *before*, and keep together, such articles as are of the same import, and are the subdivisions of preceding articles. They sometimes stand *after*, and keep together, such articles as make above one line, and have either pecuniary, mercantile, or other posts after them, which are justified to answer to the middle of the brace.

The bracing side of a brace is always turned to that part of an article which makes the most lines.

Braces are sometimes used in the margin to cut off a chronological series from the proper notes of the work. They are generally cast to two, three, and four m's, but can be made larger if ordered. When there is occasion for them larger, middles and corners are used with metal rules, so that the brace may include any space.

Middles and corners, as well as metal rules, require to be cast with great exactness, that when joined they may appear as one piece ; their shoulders in dressing should be planed away, so that the beard may not prevent the face from meeting.

Middles and corners are convenient in genealogical works, where they are used the flat way ; and where the directing point is not always in the middle, but has its place under the name of the parent, whose offspring stands between corner and corner of the brace inside, in order of primogeniture.

Of Superiors.

As we have already treated of superior letters and figures under the head of references, it will not be necessary to take further notice of them here, than to observe, that they should contain no more than the bare alphabet, without any double letters. Neither ought the j to be used as a reference, on account of its being a descending letter. A larger number should be cast of the first eight sorts ; a less of the second, and a still less quantity of the third eight sorts ; because it often happens that references

begin with ^a in every page ; though sometimes they are continued to the end of a chapter, or other division of a work ; in which case they may run the length of the alphabet.

The same rule may be observed in respect to superior figures, more of the first five being used than of the others, except the nullo, which may be used as a degree in geometrical works.

Of Fractions.

Fractions, or broken numbers in arithmetic, are seldom cast to any other bodies than those of pica, small-pica, longprimer, bourgeois, and brevier. The pica is equal to two nonpareil bodies, and the longprimer to two pearl.

The separatrix, or rule between the numerator and denominator, was formerly joined to the foot of the first : but it is considered that the figures of 3, 4, 5, 7, 9, are thereby cramped, and for that reason it is now cut to run in the top line of the denominating figure, which is a considerable improvement.

The goodness of fractions does not consist in their having a small and fine face, but rather in shewing themselves full and clear. The improvement which has taken place in the appearance of our modern figures, ought to be followed in the casting of fractions :—In works where they are used, they should appear clear and conspicuous, independent of the propriety of preserving their proportion.

Where a fraction happens with large-bodied figures, such as great-primer, and upwards, it is usually set out at

length, unless nonpareil figures can be conveniently had, which may be justified with a space, of the same neatness as fractions cast to the body.

Of Quotations.

Quotations are cast to two sizes, and are called broad and narrow. They require to be dressed and finished with as much care as any other sort, that they may stand true upon all occasions. They vary in their size according to the standard of the foundery they are cast at, which is highly improper; as they should be governed by a regular standard as well as every other sort, and to that standard press-joiners ought to cut their furniture; but we are sorry to observe so little attention paid to this important part of the joiners' business, who follow too much in the steps of the letter-founder, and cannot decide on and adhere to a standard gauge for their furniture. This want of uniformity gives the compositor much trouble in making margin, and with all his care a form will sometimes go to press imperfect in this respect, which is immediately discovered on laying on the reiteration. The pressman has then to unlock the form in order to make register; from this, a dispute will too frequently arise between him and the compositor; and, what is still worse, from frequent unlocking on the press the pages will suffer some derangement, so that the most skilful corrector's endeavours to send a work perfect to press, will be frustrated.

Quotations should not be cast so high as they sometimes are, for no other purpose than to increase their weight; if they are above the height of a quadrat, they will black the paper; and the pressmen, who are generally not very patient in remedying what may obstruct the

progress of their work, generally apply to the sheeps-foot, by which means they are rendered useless.

Justifiers are cast for broad and narrow quotations, to all sizes, from double-pica to pearl inclusive, for the purpose of ranging the side note with its proper text ; in doing which great care is requisite, especially where there are many in a page.

Of Two-line Letters.

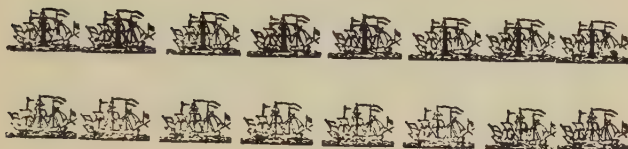
They are cut to the following bodies, pearl, nonpareil, minion, brevier, burgeois, long primer, small pica, pica, English, and double pica, and are found extremely useful in titles, the beginning of chapters, &c. A specimen of the different sizes will be given in its proper place.

Of Flowers.

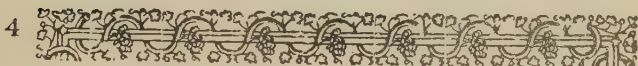
Flowers were formerly considered of the first importance ; and the ingenuity of the compositor in forming devices with different kinds and sizes of flowers, was completely put to the trial. Master-printers have now reason to rejoice, that the present improved mode of printing has eased them of the burthen of expensive founts of flowers and cases.

They are still used in some of the country towns of England, but principally as borders to cards ; we shall therefore give a specimen of the different sizes, which are cast to all the regular bodies of letter.

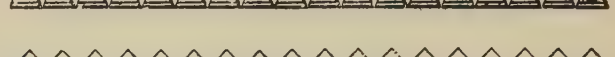
This specimen is from the foundry of Messrs. Fry and Steele, and may be considered, perhaps, as complete as any other in the trade.

Burgeois Two Line Ships.*Four Lines Pica Checks.**Two Lines Great Primer Check.*

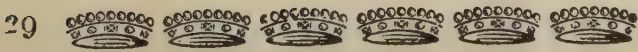
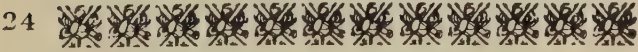
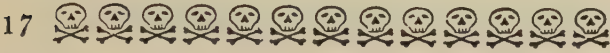
Four Lines Pica.*Two Lines English.*

Double Pica.

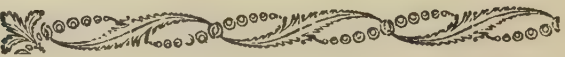
Great Primer.

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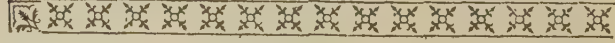
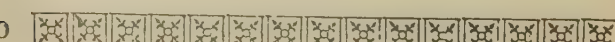
Great Primer.



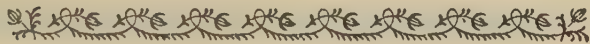
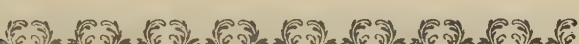
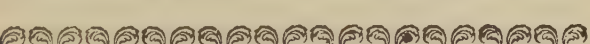
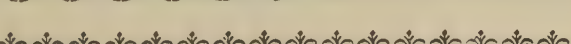
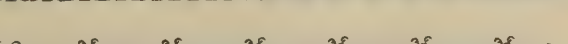
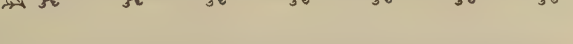
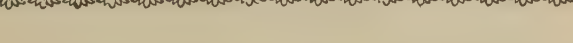
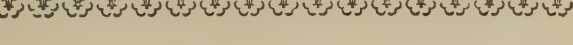
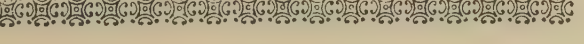
Great Primer.

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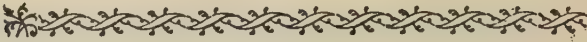
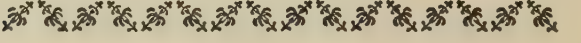
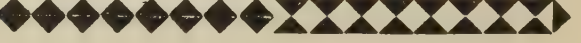
English.

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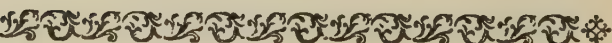
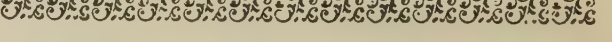
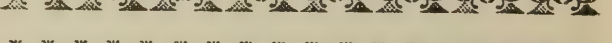
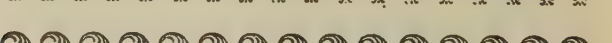
English.

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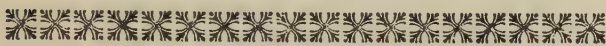
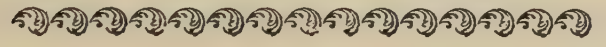
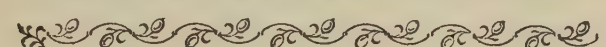
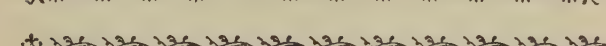
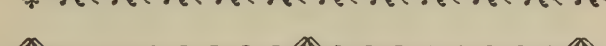
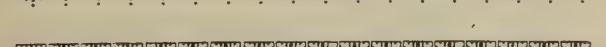
English.

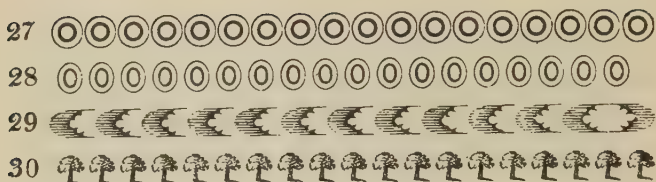
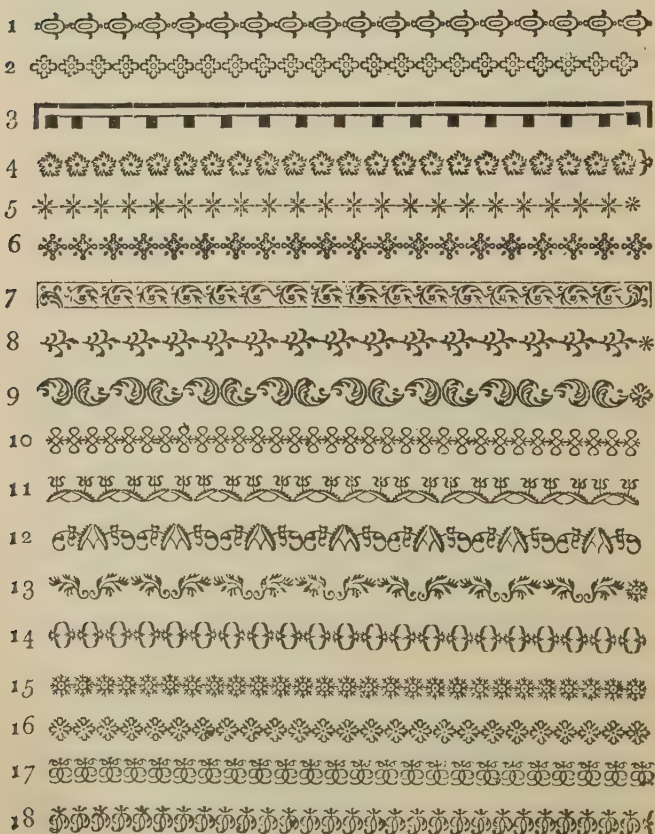
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Pica.

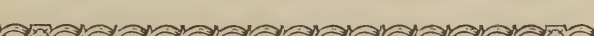
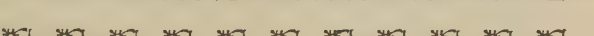
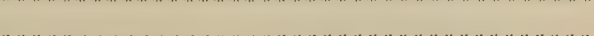
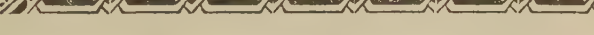
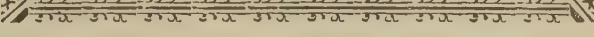
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Pica.

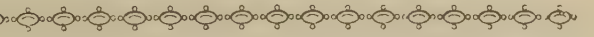
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Pica.*Small Pica.*

Small Pica.

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Long Primer.

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Long Primer.

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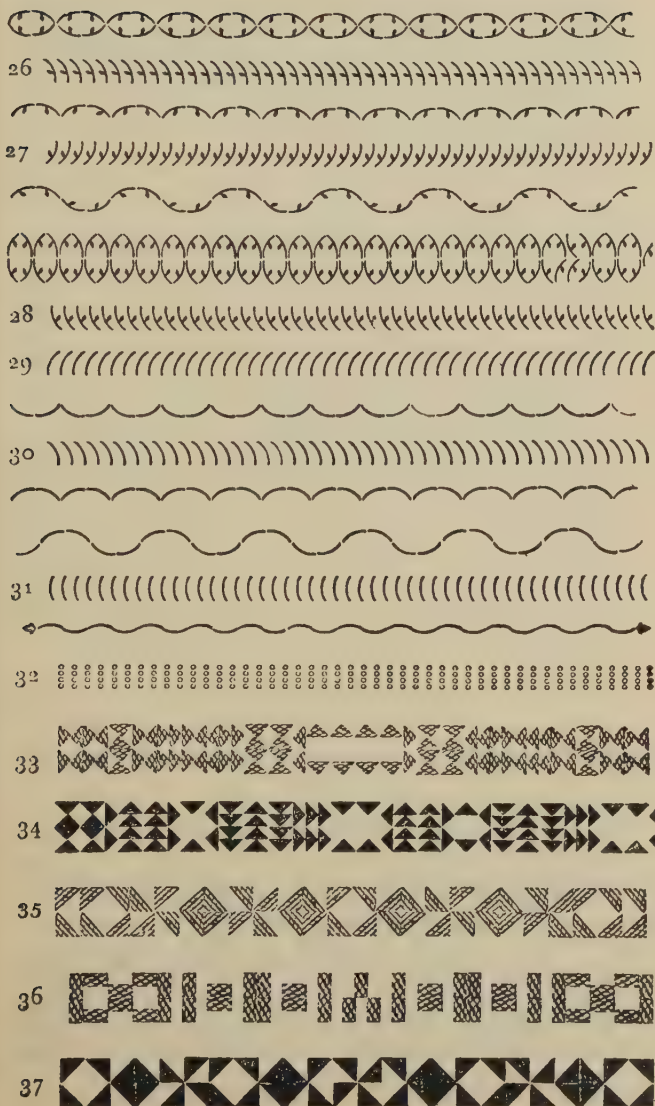
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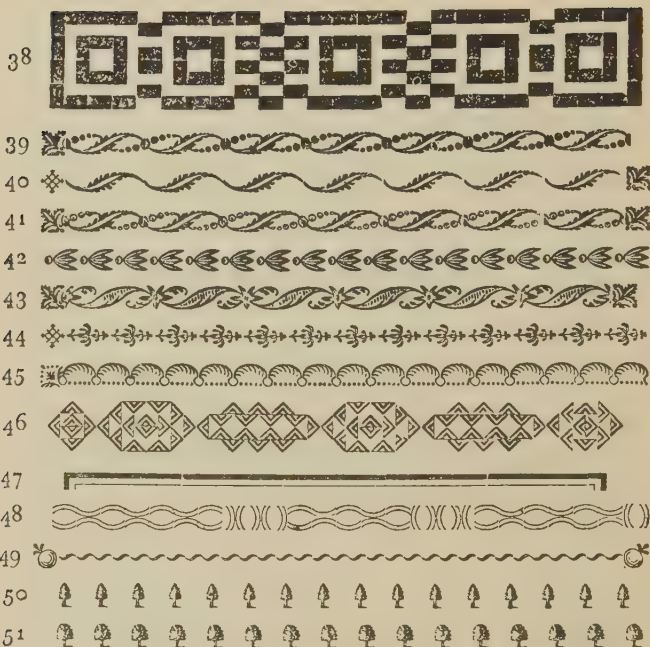
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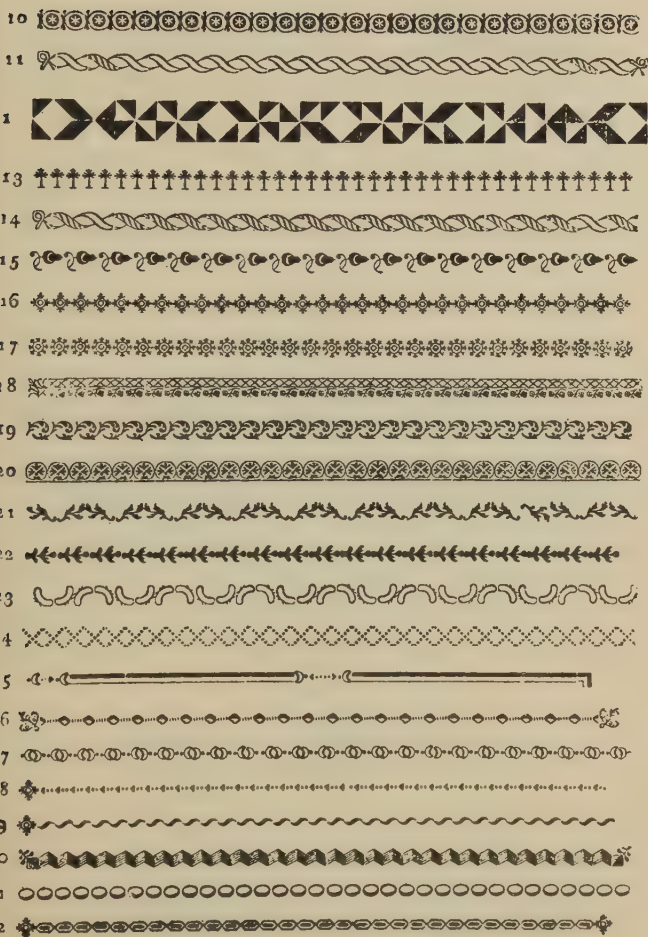
* * * * *

Long Primer.



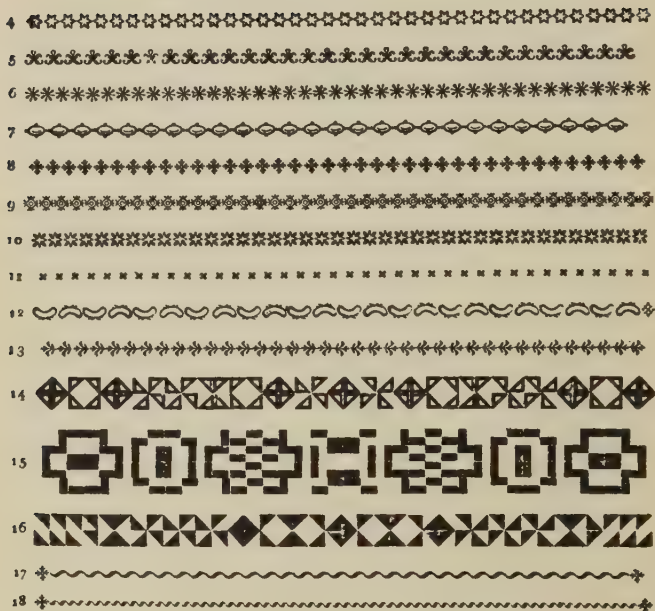
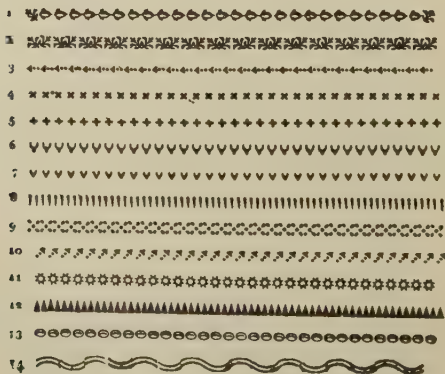
Long Primer.*Brevier.*

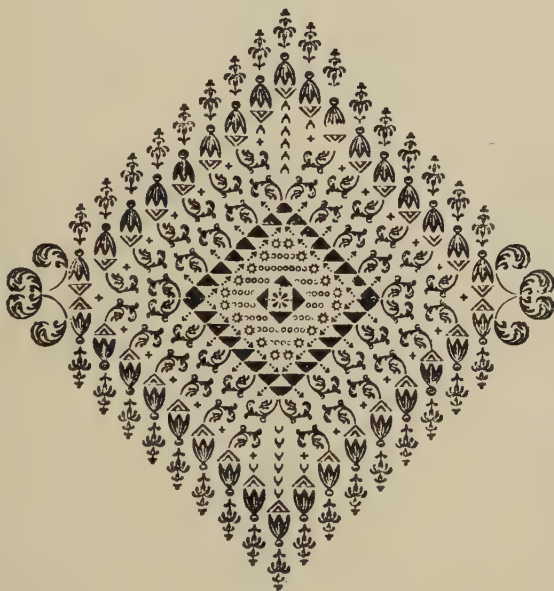
Brevier.

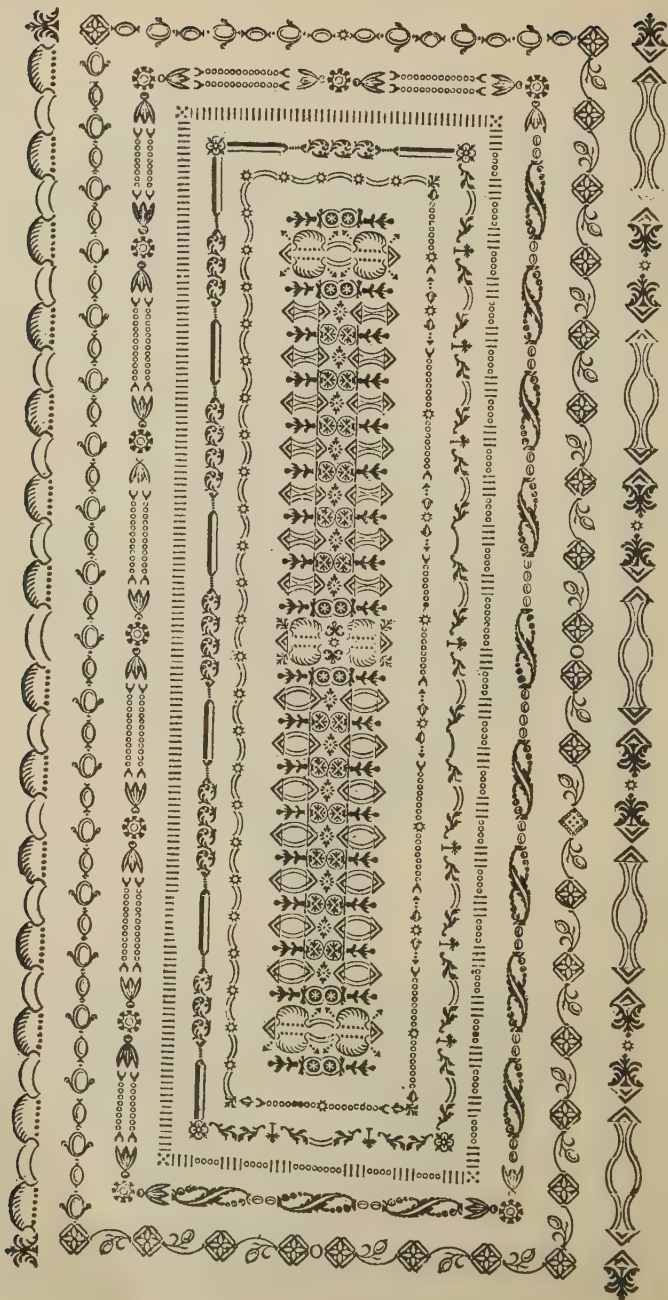


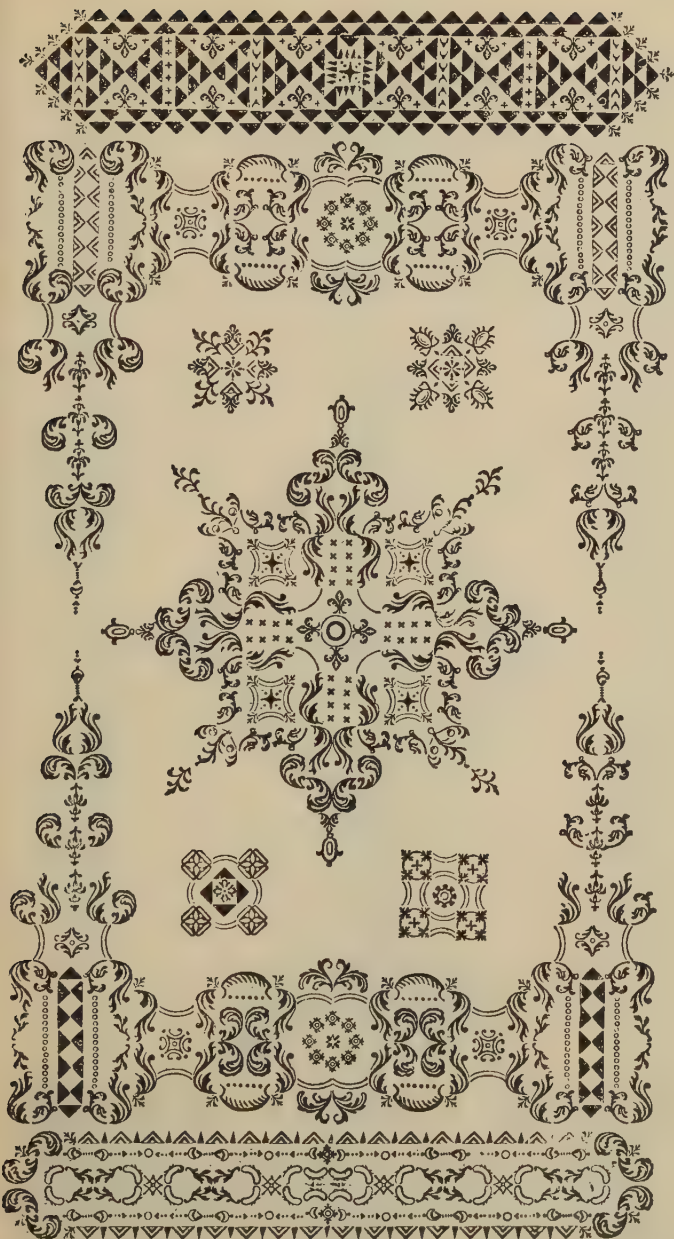
Nonpareil.

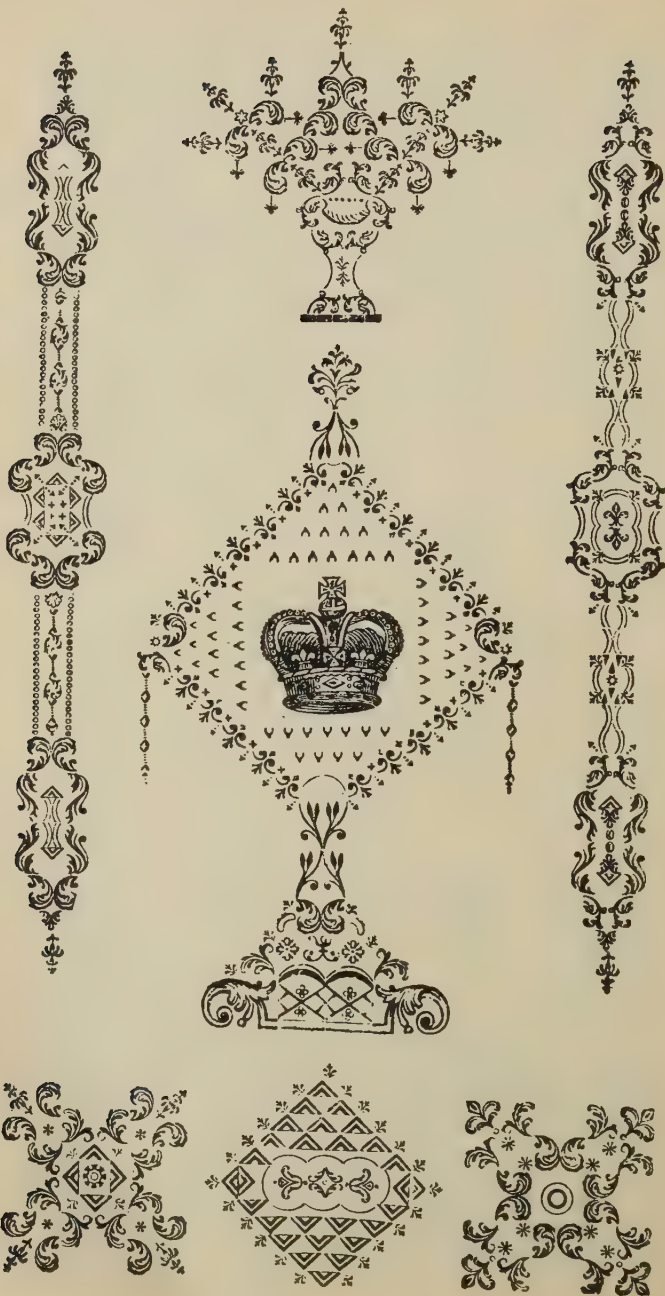


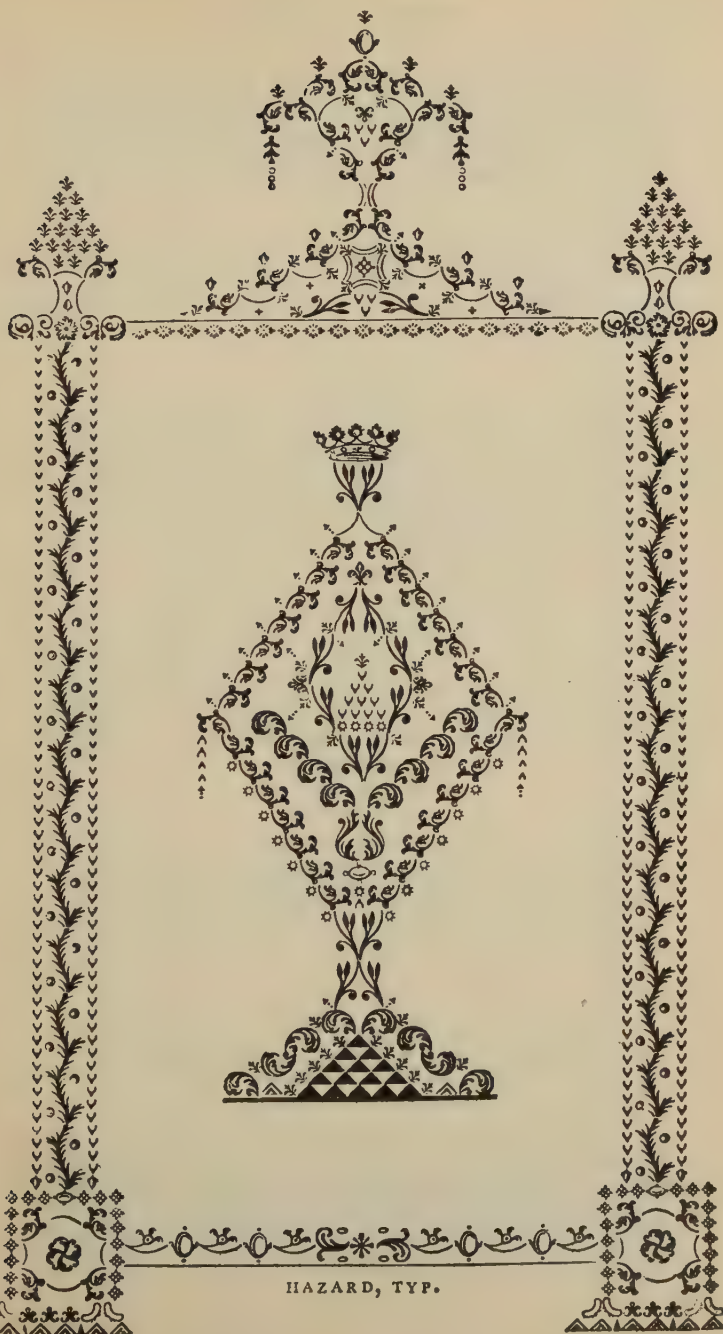
Nonpareil.*Pearl.*



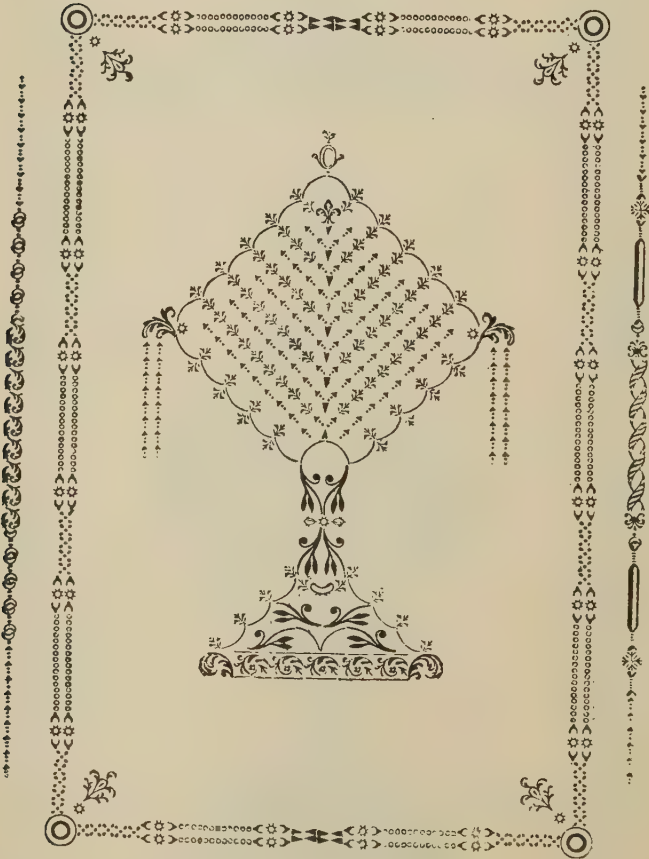




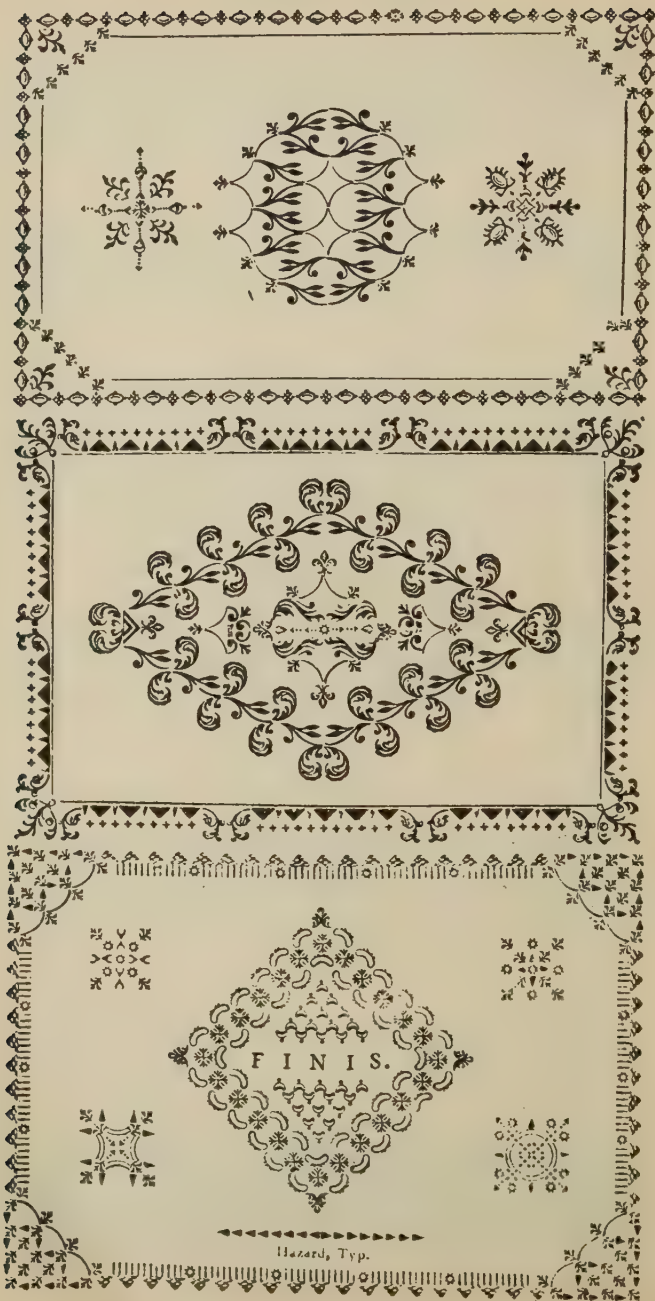


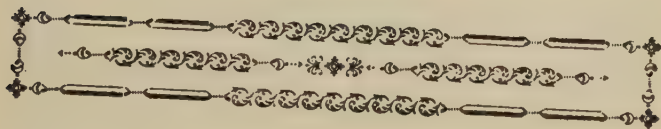


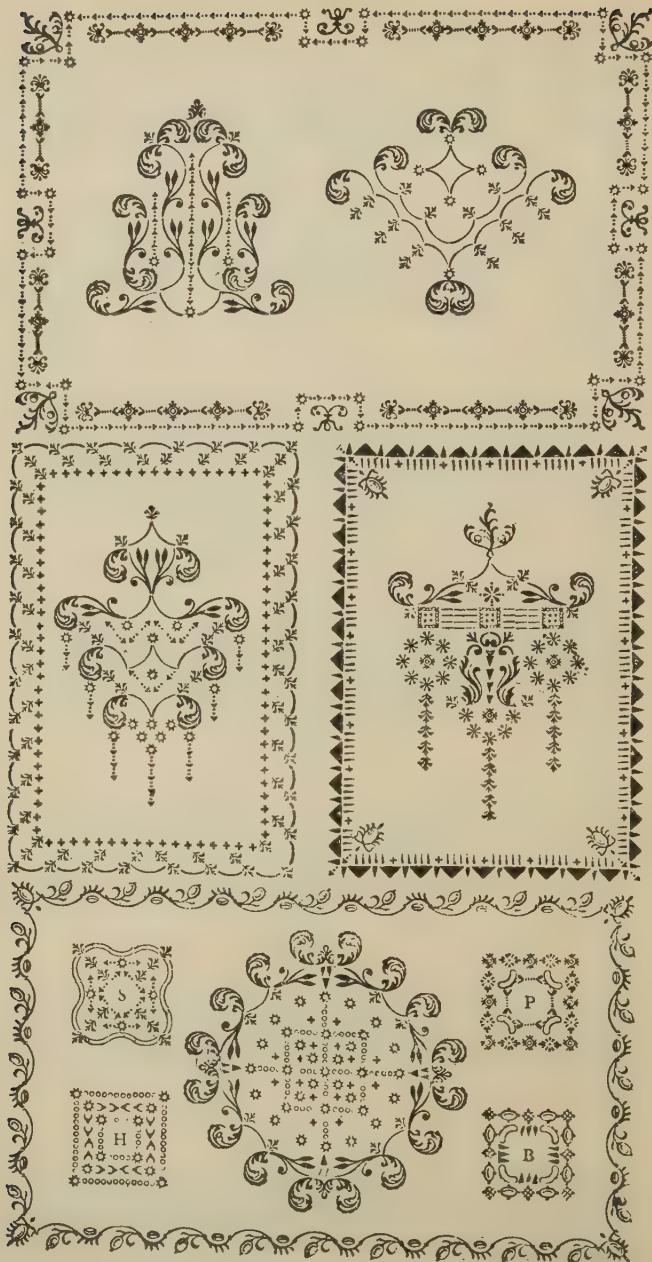
HAZARD, TYP.

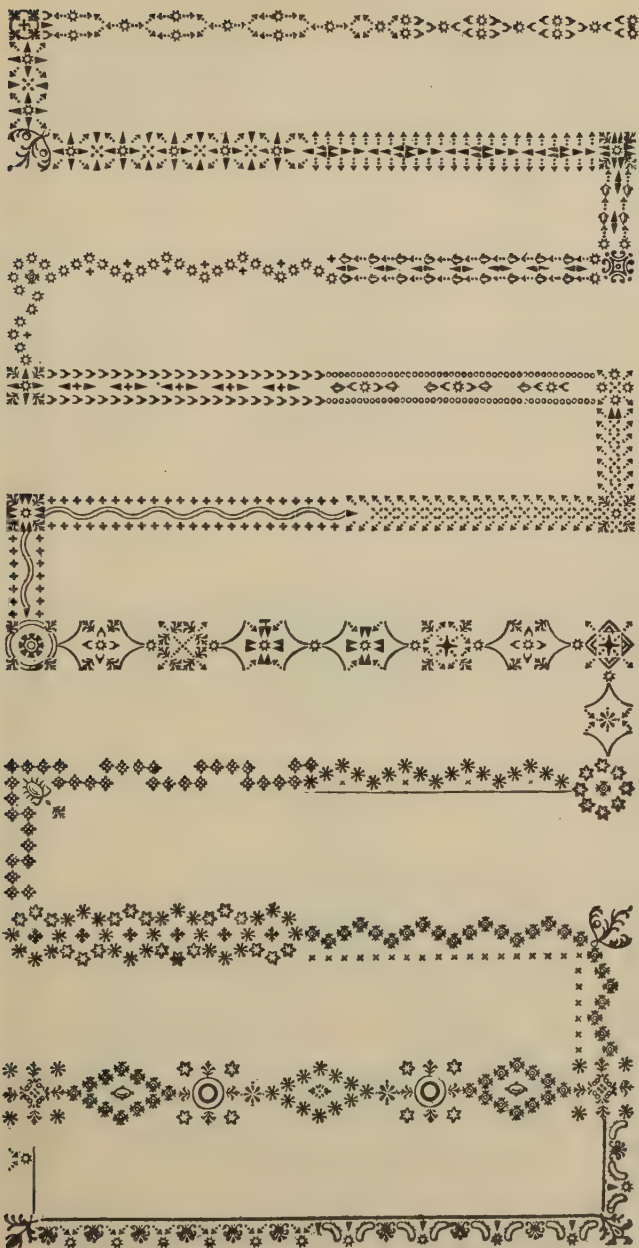














BATH.



1794.





The foregoing devices are by the late ingenious Mr. Hazard, of Bath, many years a respectable master-printer of that place. They display great taste and ingenuity, and have been much admired and often copied, particularly at the time when decorations of this sort were generally adopted. We are informed also that Mr. Hazard designed the greater part of the flowers in the preceding specimen of Messrs. Fry and Steele.

CHAP. V.



Of the Names of Letter, and their Bearings to each other.

HAVING endeavoured to treat of all the sorts contained in a complete fount of letter, and made some observations on the use and proper application of them, it will now be proper to mention that each fount is called by a particular name. The names exhibited in the subsequent scheme, are given to the several bodies of letter, because they are constituted of upper and lower case sorts; but whence each name in particular has its origin, or from whence their signification is derived, we are not sufficiently acquainted; neither does it appear of much importance to enter on the subject upon speculative argument. The names of the different bodies of letter here exhibited, in their descending orders, are according to the proper appellation which is given to each of them in England, France, Germany, and Holland; by comparing one with the other, we may endeavour to account for the names of some of them.

ENGLISH.	FRENCH.	GERMAN	DUTCH.
1 French Canon	Le gros Double Canon	Imperial	Parys Romeyn
2 Two lines Double Pica	Le Double Canon	Real	Groote Kanon
3 Two lines Great Primer	Le gros Canon	Missal	Kanon
	Le Trismegiste	Sabon	
	Les deux Points de gros Ro- main	Canon	
4 Two lines English	Le petit Canon	Roman	Dubbelde Augustyn
5 Two lines Pica	Les deux Points de Cicéro, ou la Palestine		Dubbelde Mediaan
6 Double Pica	Le gros Paragon	Text, or Secunda	Dubbelde Dessendiaan
7 Paragon	Le petit Paragon	Paragon	Paragon
8 Great Primer	Le gros Romain	Tertia	Text
9 English	Le Saint Augustin	Mittel	Augustyn
10 Pica	Le Cicero	Cicero	Mediaan
11 Small Pica	La Philosophie	Brevier, or Rheinlander	Dessendiaan
12 Long Primer	Le petit Romain	Corpus, or Garmond	Garmond
13 Burgeois	La Gaillarde		Burgeois
14 Brevier	Le petit Texte	Petit, or Jungfer	Brevier
15 Minion	La Mignione	Colonel	
16 Nonpareil	La Nonpareille	Nonpareille	Nonpareil
17 Pearl	La Parisienne, ou Sedanoise	Perl	
18 Diamond			

French canon is confessed to have been first produced by some artizan of that nation, and employed in some work relating to the canons of the church ; to which the German title, missal, likewise alludes.

The sizes marked 2, 3, 4, 5, 6, have their names from the respective bodies, of which the depth of two m-quadrats answers to one of the double sizes. But we must here take notice, that our double pica size falls in with what the Germans call secunda, from which it follows that there should be a prima ; but because we have met with no letter of that name, we conclude that prima, being a size larger than secunda, and happening to answer afterwards to two lines English, prima lost its first name, and was turned into that of Roman. Besides, that double pica goes in Germany by the name of secunda, that letter is also called text ; as we cannot assign the reason for it, we shall leave it to connoisseurs to observe which of the primitive books has its text printed in that character.

Paragon is the only letter that has preserved its name, being called so by all the printing nations. Its appellation shews, that it was first cut in France ; and at the same time gives us room to suppose, that the state of well shaped letter there was at that time but indifferent ; because, when paragon happened to turn out a letter of better shape than the rest, it received the name of *perfect pattern*, which the word paragon implies.

Great primer is called tertia in Germany, and is therefore one of the major sizes of letter which in the infancy of the art served for printing several works of consideration, and particularly the bible ; on which account it is by some called bible text.

English is called mittel by the Germans, and St. Augustin by the French and Dutch ; both which names might be productive of considerable argument ; the word

mittel bearing the same meaning with middle, tells us that the former sizes of letter were seven in number, of which English was the centre, having prima, secunda, and tertia, on one side, and pica, long-primer, and brevier, on the other. As to the name of St. Augustin, which the French and Dutch give it, it informs us, that the writings of that father were the first work which was done in letter of that size; but whether the one nation or the other have a right to claim the honour of the performance, we shall not take upon ourselves to determine.

Pica is another letter that admits of having particular notice taken of it, on account of its being called Cicero by the French and Germans; for as the preceding size was distinguished by the name of St. Augustin, so has this been honoured with that of Cicero, on account of the Epistles of that writer having been first done in letter of this size, in which we are not left to mere conjecture, but have tradition on our side; for in the year 1704, it was asserted by a compositor, then upwards of seventy years of age, whose authority, though allowed to rest on hearsay evidence, deserves notice, when we consider the early period the assertion was made, and that no contradiction has prevented its belief, as well as the probable reason why founts should be named after the works for which they were first used; therefore we have only to trace this relation two or three lives back, and we shall be brought to the time when it was considered an undoubted fact. This point ascertained, why the pica body acquired the name of Cicero, it may open a fair field for conjecture on most of the other disputed bodies, and may enable those who feel interested in the controversy to decide whether the Germans or the French were the first who dedicated the letter of this body to the name of Cicero on the before-mentioned account.

Small-pica, being of an irregular body, takes its name here from its inferiority to pica. But in France they assign the invention of this body of letter to philosophie ; for which, indeed, they ~~may~~ have their reason, considering that their Cicero and philosophie are of one and the same face ; from which we conclude, that small pica has not been thought there worth cutting with a face proportionable to its body ; and that the cramping of Cicero to philosophie, was done with no other view than to get in upon the former. This we venture to suggest, though we can form no ideas why the Germans give this letter the name of brevier.

Upon the same supposition, that some bodies of letter took their names from works in which they were first employed, we are induced to believe that the Germans gave the name of corpus to this character, on account of their Corpus Juris being first done in this size, as it is still continued in that letter ; but whether Garmond is the name of the author, or what signification else it bears, we have no items of. In contradistinction of the French gros Romain, they call this size letter petit Romain, conformable to the distinction that is made between great primer and long primer in England.

Burgois is a letter of an irregular body, and has hitherto been received accordingly. By its name it seems to have first come from France, and that it was dedicated to the master printers there. Gaillarde is a letter of the same body, but has the face of petit Romain.

Brevier had its name from being first used for the breviary, a Roman catholic church book, which is commonly printed in this character. It is also called petit, and jungfer, or maiden letter, by the Germans, on account of its comeliness ; to which, and their smallness, the names of minion, nonpareil, pearl, and diamond, allude.

Of the Proportion of one Body of Letter to another, as to Depth and Width.

It is of considerable importance to the printer, to be well acquainted with the proportion one body of letter bears to another; without this knowledge he cannot form an accurate opinion what size type a work should be printed with, which is confined to a certain number of sheets; neither will he be able to judge of the extent of a work, after casting off the copy, unless he be in possession of some regular rule to guide his calculation, as to the quantity of copy the type proposed may either get in or drive out.

Various methods have been adopted in works of this nature to point out the proportion one size letter bears to another, but they do not appear to us sufficiently clear to be readily understood, and are therefore seldom resorted to.

As scales for calculation cannot be constructed on too simple a plan, we flatter ourselves the one here presented will be found to answer its purpose in every respect. This scale is cut in wood*, in the manner of a rule, with the sides declining to a feather edge; each side contains the measurement of two founts, consequently two rules will give the proportions of eight different founts, being all that are in general use. We particularly recommend these rules to the attention of the trade; they are extremely

* The invention of a respectable and intelligent master printer, (Mr. H. Bryer), who is deservedly entitled to the thanks of the trade for this very accurate and expeditious mode of measuring off matter. These rules are made by, and may be had of Mr. Bleuler, an eminent optician, No. 27, Ludgate Street, London.

Scale of Sizes from Great Primer to Nonpareil inclusive.

Great Primer	English	Pica	Small Pica	Long Primer	Bourgeois	Brevier	Nonpareil
							5
			5	5	5	5	10
5	5	5					15
		10	10	10	10	10	20
	10						25
		15	15	15	15	15	30
10	15						35
		20	20	20	20	20	40
	20						45
		25	25	25	25	25	50
15	25						55
		30	30	30	30	30	60
	30						65
		35	35	35	35	35	70
20	35						75
		40	40	40	40	40	
	40						
		45	45	45	45	45	
25	45						
		50	50	50	50	50	
	50						
		55	55	55	55	55	
30	55						
		60	60	60	60	60	
	60						
		65	65	65	65	65	
35	65						
		70	70	70	70	70	
	70						
		75	75	75	75	75	
	75						
		80	80	80	80	80	
	80						
		85	85	85	85	85	
40	85						
		90	90	90	90	90	
	90						
		95	95	95	95	95	
45	95						
		100	100	100	100	100	
	100						
		105	105	105	105	105	
	105						
		110	110	110	110	110	
	110						
		115	115	115	115	115	
	115						
		120	120	120	120	120	
	120						
		125	125	125	125	125	
	125						
		130	130	130	130	130	
	130						
		135	135	135	135	135	
	135						
		140	140	140	140	140	
	140						
		145	145	145	145	145	
	145						
		150	150	150	150	150	
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		155	155	155	155	155	
	155						
		160	160	160	160	160	
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		165	165	165	165	165	
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		170	170	170	170	170	
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		175	175	175	175	175	
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		235	235	235	235	235	
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		240	240	240	240	240	
	240						
		245	245	245	245	245	
	245						
		250	250	250	250	250	
	250						
		255	255	255	255	255	
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		270	270	270	270	270	
	270						
		275	275	275	275	275	
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		530	530	530	530	530	
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		555	555	555	555	555	
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		560	560	560	560	560	
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		565	565	565	565	565	
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		570	570	570	570	570	
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		575	575	575	575	575	
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		625	625	625	625	625	
	625						

useful, being made with the utmost exactness, and will be found more accurate and convenient than quadrats in casting off matter.

To ascertain the number of lines in a page, that part of the rule, with the fount on its side with which the calculation is to be made, must be placed lengthways on the matter or printed page, and reversed, in order to know the width or number of m's.

As this article bears an affinity to the subject of casting off copy, its utility will be more particularly noticed under that head.

Of casting off Copy.

To cast off manuscript with accuracy and precision, is an essential object, but a very unpleasant and troublesome task, requiring great attention and mature deliberation. Much difficulty and trouble are occasioned with copy irregularly written, containing interlineations, erasures, and variations in the size of the paper; to these irregularities the attention must be closely directed, but they will too frequently baffle the best endeavours at calculation. Such a slovenly mode of sending works to press cannot be too much deprecated.

The first thing necessary is to take a comprehensive view of the copy, and to notice whether it is written even, whether it has many interlineations, &c. the number of break lines, and whether divided into chapters and sub-heads, so that allowances may be made in the calculation, that the plan of the work may not afterwards be infringed on. These observations should be entered as a memorandum on a separate piece of paper, to assist the memory and save the trouble of re-examining the manuscript.

This preparation being made, we take that part of the copy for calculation nearest the general tendency of the writing, and reckon the number of words contained in one line, previously counting a number of separate lines, so that the one we adopt may be a fair average ; we then take the number of lines in a page, and multiply the one by the other, which we again multiply by the quantity of folios the manuscript copy may contain, and thus we are put in possession of the amount of the words contained in the work, with as little loss of time and as much accuracy as circumstances will admit ; the necessary allowances should then be made for break lines, chapters, insertions, &c. according to the observations previously made on the memorandum.

If the information has been furnished, what size letter the work is to be done in, and what the width of the page, we make our measure accordingly, and after composing a few lines of the manuscript copy, are enabled to form an opinion what number of words come into each printed line ; we then take the length of our page, generally to double the number of m's contained in a single line, and multiply the one by the other, which produces the information we had previously gained from the adoption of the same mode on the manuscript page ; we compare their results, and if the manuscript drives out, we multiply the print by a larger number than the last folio of the writing, and so, *vice versâ* ; if the print drives out, we multiply it by a less, until we bring the number of words to agree ; the multiplier on the printed calculation will shew what will be the last folio of the printed volume, which we divide into sheets according to the given size of the work, and we are then in full possession, whether it will bear to be leaded, or the chapters begin pages, &c. or whether it must be made up close, the measure widened, the page lengthened, or the size of the letter reduced.

Should the size of the page and letter be left to the opinion of the printer, with no other order than the number of sheets the work is intended to make, from following the above mode he will be enabled pretty accurately to give his directions;—but as it is necessary on a subject like the present to be as clear in our observations as possible, we will exemplify what has been laid down. We are supposed to have made our remarks upon the manner of the writing as directed, and we take the number of words in a line of manuscript at 20, the lines in a page at 50; we multiply 50 by 20, which will produce 1000 words in a page; we then multiply 1000 by 422, which are supposed to be the number of folios in the manuscript, and we shall find it contain 422,000 words.—The work being printed in pica 8vo, 20 m's measure, and each line containing 10 words, each page 40 lines—the case will stand thus :

MANUSCRIPT.		PRINTED.
50		40
20		10
1000		400 }
422		1055
		400
2000		
2000		422000 words.
4000		
422000 words in MS.		
		Divide
		16 1055 65 sheets,
		15 pages.

Having ascertained the number of sheets the work will make, and that number being sufficient for two volumes, they are divided accordingly. But should the author wish to have his work comprised in one volume, it is requisite to be prepared with the sized type and measure which may accord with his inclination. By referring to

the preceding scale of proportions, and placing the brevier by the side of the pica body, we find that a page will contain sixty-two lines instead of forty*, and the same difference in the width, which will be one half more than the former calculation. We therefore multiply 62 by 15 words in a line, one half added to the 10 in pica, which will give 930 words in a page; multiply that by 454, it will produce 422,220 words; 454 will therefore be the last folio, should the volume be printed in brevier, which will be 28 sheets and six pages. In works that are to be leaded, the calculation must be made according to the thickness of the lead in the house in which the work is to be printed, as they are apt to vary; though in general three leads go to a brevier; therefore in a work similar to the foregoing we should add one-third for leads, which will drive it out to 604 pages, or 37 sheets, 12 pages, and is more than a volume generally contains; if it should be thought so, the measure may be widened and the page lengthened.

As there are two methods of casting off copy, we shall conclude this article with the one laid down in former grammars.

“ After having made the measure for the work, we set a line for the letter that is designed for it, and take notice how much copy will come into the line in the stick, whether less or more than a line of manuscript. And as it is seldom that neither one nor the other happens, we make a mark in the copy where the line in the stick ends, and number the words that it contains. But as this is not the safest way for casting off close, we count not only the syllables but even the letters that are in a line in the stick, of which we make a memorandum, and proceed to

* See the scale of proportion one body of letter bears to another, p. 134.

set off a second, third, or fourth line, till a line of copy falls even with a line in the stick. And as we did to the first line in the stick, so we do to the other, marking on the manuscript the end of each line in the stick, and telling the letters in each, to see how they balance against each other. This being carefully done, we begin counting off, each time, as many lines of copy as we know will make even lines in the stick : For example, if 2 lines of copy make 3 lines in print, then 4 make 6, 6 make 9, 8 make 12, and so on, calling every two lines of copy three lines in print.

“ In like manner we say, if 4 lines make 5, then 8 make 10, and so on, comparing every four lines of copy to five lines in print.

“ And in this manner we carry our calculation on as far as we have occasion, either for pages, forms, or sheets.

“ The foregoing calculations are intended to serve where a line of print takes in less than a line of copy, and therefore where a line of print takes in more than a line of copy, the problem is reversed, and instead of saying, if 2 lines make 3, we say, in this case, if 3 lines of copy make 2 lines in print, then 6 lines make 4, 9 make 6, 12 make 8, and so on, counting three lines of copy to make two lines in print. In this manner we may carry our calculation to what number of pages, forms, or sheets we will, remembering always to count off as many lines of copy at once, as we have found they will make even lines in the stick. Thus, for example, if 5 lines make 7, the progression of 5 is 10, 15, 20, &c. and the progression of 7 will be 14, 21, 28, &c.

“ In counting off copy after this manner, we take notice of the breaks ; and where we judge that one will drive out, we intimate it by a mark of this $\angle$ or this [shape ; and again, where we find that a break will get in, we insert

the mark thus Δ or thus $]$. And to render these marks conspicuous to the compositor, we write them in the margin, that he may take timely notice of, and keep his matter accordingly.

“ We also take care to make proper allowance for heads to chapters, sections, paragraphs, &c. and mention in the margin what depth of lines is left for each, in case their matter varies in quantity.

“ In examining the state of the copy, we must observe whether it has abbreviations, that we may guard against them in casting off, and allow for them according to the extent of the respective words, when written out at length.”

CHAP. VI.

*Observations on Composing.*

HAVING arrived at that part of our work which more immediately concerns the young beginner, we shall now set out with making a few observations on the position or attitude he should endeavour to acquire at ease, on his first introduction to that part of the business. This does not appear to have been of sufficient importance to arrest the attention of former writers on this subject, yet so great is the evil resulting from falling into improper habits at first, that nothing but a determined perseverance in those who have experienced their ill effects can remedy them. Many men, now working in the trade, frequently reflect, and with much justice, on persons under whose care they were brought up, for omitting to check them in those ill-becoming postures which produce knock knees, round shoulders, or other deformities. It is to be regretted that those who undertake so important a charge, as the instruction of youth in the first rudiments of the art, are not better qualified, or do not bestow on their trust a greater attention.

What to a learner may appear fatiguing, time and habit will render familiar and easy ; and though to work with his cases on a level with his breast may at first tire his arms, yet use will so inure him to it, that it will become afterwards equally unpleasant to work at a low frame. His perseverance in this mode must be strengthened by the reflection that it will effectually prevent his becoming round shouldered, a distinguishing mark by which compositors are in general known, especially if they are above the common stature. This method will likewise keep the body in an erect position, and prevent those effects which result from pressure on the stomach.

The standing position should be easy, with the feet not too much apart ; neither should the idle habit of resting one foot on the bed of the frame be encouraged, or standing with one foot bent inwards, the certain forerunner of deformity. The head and the body must be kept perfectly steady, the arms alone performing the operations of distributing and composing.

The question still remains undecided with many masters, as to the most proper part of the business that should first engage the attention of the learner without confusing his ideas ; various methods are adopted, each following the mode he thinks best. Sorting pie is generally the first employment, and afterwards to set it up again, which unquestionably gives them a strong insight into the nature of the business, makes them acquainted with the different sizes of type and the method of composing, and prepares their understanding for the comprehension of whatever direction may be given them when they are put to the case. We shall, however, follow the method generally adopted, which is that of first teaching him the nature of the cases, a knowledge easily acquired by attention.

Since the very general introduction of round, in the room of long s's, many cases have been made upon a plan different from the original ones. It will not, perhaps, be improper here to give a sketch of those which have been adopted in many respectable printing-offices in London.

In page 53, some remarks were made upon a scale lately produced by Lord Stanhope, wherein he proposes an alteration in the shape of the letter f, in order to do away the use of the present double letters, and to adopt others; our observations upon that alteration have likewise induced us to insert the plan of a pair of cases, in which the double letters are completely exploded. The utility of this plan we have already pointed out in the page referred to, fully convinced, that could the eye accustom itself to the proposed altered shape of the f, and were double letters relinquished altogether, the advantages that would result both to the employer and journeyman would exceed what we have before stated.

Upper Case.—No. 1.

A	B	C	D	E	F	G	A	B	C	D	E	F	G
H	I	K	L	M	N	O	H	I	K	L	M	N	O
P	Q	R	S	T	V	W	P	Q	R	S	T	V	W
X	Y	Z	Æ	Œ	U	J	x	y	z	æ	œ	u	j
1	2	3	4	5	6	7	á	é	í	ó	ú	¶	†
8	9	0	ç	Hair Spaces.	fb	fk	á	é	í	ó	ú	¶	†
ä	ë	ï	ö	ü	fl	k	à	è	ì	ò	ù	§	*

Lower Case.—No. 1.

a	[	æ	œ	'	j	e		s	(	p	!	;	ff	ff
&	b	c	e	d				i	f	f	g	ff	ff	ff
ff													ff	ff
ff	l	m	n	h	o		o		y	p	,	w	n	n
ff													n	n
ff													n	n
z	v	u	t	Spaces.		a		r		q	:	:	Quadrats.	
											.	.		
x														

Lower Case.—No. 2.

(UPON LORD STANHOPE'S PLAN.)

&x	æ	œ	j	k	e	,	w	-	!	?
b	c	d								
l	m	n	h		o	y	p	n Quadrats.	m Quadrats.	.
v	u	t	Spaces.							
a	r	Quadrats.		x	z					

Improved Fount Upper Case.

7	8	9	0	J	U	X	Y	Z
5	A	B	C	D	E	F	G	
3	H	I	K	L	M	N	O	
1	P	Q	R	S	T	V	W	

Improved Fount Lower Case.

x	z	k		j	q	-	[	)
b	c	d	e	i	f	g	&	!
							,	?
l	m	n	h	o	y	p	.	:
								;
v	u	t	s	a	r	w		,

Having made himself thoroughly acquainted with both the upper and lower cases, and with the face of the letter, that he may be capable of distinguishing the difference between the b and the q, the d and the p, the n and the u, &c. he is generally put to composing, the person under whose care he is brought up working by his side, in order to give him instruction.

It would be departing from the customary routine were we here to consider the subject of composing; it shall therefore be introduced in its proper place, and we will now make some observations on the method of

Laying of Cases.

This implies filling them with sorts of a new fount of letter.

Being provided with fount cases, (plans of which, according to the improved mode, are annexed), the weight of the fount is ascertained, and a number of cases filled according to its extent. Each box should be moderately filled with its proper sort; the fount case may then be supplied, and what remains over put into coffins, and placed away in baskets, or any other convenient receptacle, to be ready when wanted.

New letter being more liable to stick, after being wetted, than any other, should be sprinkled with strong soap water, which has been found to answer the purpose of preventing this unpleasant circumstance.

The advantage resulting from the improvement in the fount cases, must appear obvious. The old plan was attended with many inconveniences; the boxes being deep, it became difficult to get the sorts out of the smaller

ones, and their not being much longer or wider than the common cases, the difference in depth did not allow sufficient room for the superfluous sorts.

By making the fount cases longer and wider, the boxes are enlarged, and as spaces and quadrats are kept in drawers, and the long s being now generally exploded, the parts allotted to their use in the fount case may be otherwise appropriated.

The capital fount case is differently constructed ; it but seldom occurs that either small capitals or accented letters require more room than the common cases supply, therefore it is only necessary to provide a case capable of containing the capitals and figures ; a common sized case will answer the purpose, with this advantage, that the boxes being larger contain not only a greater number of each sort, but are more readily taken out than in smaller boxes.

Of Distributing.

Distributing, or conveying the different sorts of letter to their respective apartments, is commonly the first of a compositor's practical exercises ; though it would be found more safe and advantageous to master and to man were this custom sometimes reversed, and composing made antecedent to distributing, which depends upon a perfect knowledge of what is, or ought to be contained in each of the different boxes in a pair of cases. But as the disposition of sorts differs almost in every printing-office more or less, it follows, that such irregularities must have their effects accordingly ; of which we do not want for instances. The first that offers itself to our observation is the loss which a compositor sustains every

time he changes his place of work ; for, being unacquainted with the situation of each sort, he is hindered, for some time in his quick and ready way of distributing, which might be easily prevented were establishers of new houses to follow one uniform method.

Other evils result from this want of uniformity, and particularly affect the master. Some compositors, rather than charge their memory with the different situations of particular sorts, transpose them into such boxes as contained them at their last place of work, consequently the situation of the letters, in that Roman case at least, is destroyed, and the transposed sorts not being replaced, the boxes become receptacles for pie ; for the right sorts being distributed at top, the undermost are rendered useless, because they are not expected to lodge in quarters that were not assigned them ; therefore if the hidden sorts happen to run short, they must be re-cast.

It would be the means of preserving a clean pair of cases, were they filled and provided with letter for a new compositor to begin his work upon, that by composing first, he might acquaint himself with the contents of his boxes, and be the better prepared for distribution ; but as few compositors feel inclined to quit the beaten track, and as a difficulty would occur in compelling them to leave the cases as they found them, or if they did leave them full of letter, might distribute it carelessly, knowing they would not have to set it out again, the evil might be still far from being remedied ; therefore those masters who take upon themselves the responsibility of deviating from general plans, must abide by the consequences that inevitably follow.

The foregoing observations, however, apply with much force to the impropriety of permitting a young beginner to distribute before he has made himself acquainted with

the boxes, as well as the letters, which he cannot acquire in a more ready manner than by first learning to compose.

He should be cautioned not to take up too much matter at a time, for, should he break his handful, he will have the less pie to clear. Even to those who are not likely often to meet with this accident, the caution is not unnecessary, as too great a weight weakens the wrist, and it is a mistaken notion that it gains time, for if one handful fall into the case, it will be more than equivalent to the time saved. When the accident does take place, the pie should be cleared away before any thing else is done.

In taking up a handful, the head of the page should be towards the distributor, which prevents the trouble as well as danger of turning it round, in order to have the nick uppermost. So much matter should only be taken up at a time, as can be conveniently held in the left hand, and not to be higher than the thumb, which guards the ends of the lines from falling.

He should be careful not to throw the letters into the case with their face downwards, as it batters them; neither should he distribute his case too full, for it invariably creates pie.

He should not be impatient to acquire a quick method at first; his principal study should be propriety, though his progress be slow; that attained, expedition will follow from practice, and he will find his advantage in composing from a clean case, though he may be longer in distributing it. A man loses double the time in correcting, that he imagines he saves from quick distribution.

With many compositors much time is unnecessarily lost in looking at the word before they distribute it. By proper attention in the learner he may avoid this, and

become, without the appearance of hurry, an expeditious as well as clean distributor. To attain which, we would recommend him never to take more letter between his fingers, than he can conveniently hold, and if possible, always to take an entire word; to keep his handful on an inclining position, so that the face of the letter may come more immediately under his eye. By proper attention and practice he will become so completely acquainted with the beard or beak of the type, as to know the meaning of the word he takes from his handful, with the cursory view he may have of it, while in the act of lifting it.

It is to this method that so many in the business are indebted for their expedition and cleanness in distribution; though to an observer the movement of their hands appears but slow. It is not to velocity of movement that compositors are indebted for their expedition, either in composing or distributing,—it is to *system*, without which their attempts may have the appearance of expedition, but produce only fatigue from anxiety and false motion. Therefore to system we would particularly call their attention, and as clean distribution produces clean composition, which not only saves time at the stone, but acquires them a respectable name, they cannot be too attentive to that part of their business.

Another material point before distributing is the well-laying up of the form. In this particular many compositors are shamefully remiss, and from this negligence arise inconveniences that lose them more time than if they had taken the first trouble, besides the unpleasantness of working with dirty letter.

The letter-board should always be kept clean, and the bottom as well as the face of the form well washed before it is laid on the board and unlocked, for if any of the dirt remain from the lie brush after it is unlocked, it will

sink into the matter instead of running off. This precaution taken, the pages should be well opened, and the whole form washed till the water appears to run from it in a clean state. A form cannot be well laid up without plenty of water. If the form appears particularly dirty, it is best to lock it up again, which works out the filth ; then rinse the bottom of it, and proceed as before. The letter once washed perfectly clean, by care may be kept so afterwards with little trouble.

Many compositors keep a piece of alum in their cases, in order to contract the grain of the skin of their fingers when distributing slippery letter ; this is a declaration of their want of cleanliness, for had they washed their letter properly, it would not be slippery.

It is sometimes necessary to dry the letter at the fire after distributing ; it is particularly recommended not to use the letter after it is in this way dried till it is perfectly cold, as very pernicious effects arise from the antimony, which the heat of the fire brings into action, when joined to the tender particles of the skin. It is always better, where it can be conveniently managed, to distribute at night, or before meals, so that the letter may dry gradually.

Of Composing.

Composing is a term which includes several exercises, as well of the mind as the body ; for when we are said to compose, we are at the same time engaged in reading and spelling what we are composing, as well as in taking care to space and to justify the matter. But that we may observe some method in our remarks, we will begin with what immediately precedes it.

When the copy of a work is put into the hands of the compositor, he should receive directions respecting the width and length of the page ; whether it is to be leaded, and with white lines between the breaks ; and whether any particular method is to be followed in the punctuation and in the adoption of capitals. These instructions being given, the compositor will make his measure to the number of pica m's directed, which is done by laying them flat-ways in the composing stick, and then screwing it up, not too tight, as that is apt to strain it, nor so slack as to allow the measure to give. He then fits a setting rule to the measure, and his case being supplied with letter, he is prepared for composing.

If the copy he is to begin on be a re-print, he will observe whether there be any difference between the type he is about to use and the copy, so that his spacing may not be affected, against which he must take the necessary precautions at the time, by widening or lessening his measure, if solid matter, or driving out or getting in each paragraph, if leaded. He should select a close-spaced line from the copy, which will at once prove if there be any variation.

It is necessary to observe, that all measures are made to pica m's, though the work may be printed in a different size type ; and that all leads, &c. are cast to pica m's, which standard being abided by, leads can always be had for any sized page, without the expense of casting, or the trouble of cutting.

Having taken notice of the state of the copy, and received his directions, the compositor begins his work ; and here we would particularly call his attention to those rules by which he may compose with accuracy, ease, and expedition. As we before observed, an ill-habit once acquired, is with difficulty shaken off ;—the variety of

motions exhibited by some compositors are truly ludicrous ; such as, nodding the head, agitating the body, throwing out the arm, ticking the letter against the case or the setting rule, with many other false movements, which not only lose time, but fatigue the mind and exhaust the body.—The swift movement of the hand is not the criterion of a quick compositor. A gentleman, some few years back, not a professed printer, though the proprietor of an extensive concern, gave orders to his overseer to discharge a compositor who had not the appearance of moving his arm so quick as others in the office with him ; but his overseer was able to convince him that this man was not only the neatest, but the most expeditious, and consequently the most valuable, man in his employ.

In composing, the left hand, which contains the stick, should always follow the right, which takes up the letters. If the left hand remain stationary, much time is lost in bringing each letter to it, and traversing a greater space than necessary ; the eye should always be fixed on the nick of the letter, before the finger is ready to take it up ; this will effectually prevent any false motion, as it may be lifted and conveyed to the stick in its proper position. A sentence of the copy should, if possible, be taken at one time, and while putting in the point and space which concludes that sentence, the eye is at full liberty to revert again to the copy for a fresh one. It is to perfection in this particular, that those compositors who are so much admired in the business are indebted for their swiftness. The time they gain is considerable, without any appearance of bustle or fatigue. By thus taking into the memory a sentence at a time, they preserve the connexion of their subject, which renders the punctuation less difficult.

From habit the compositor becomes so well acquainted with the peculiar feel of each type, that he can generally detect a wrong letter without looking at it. Those who are careful in distribution, find the advantage of it in composition. The greatest disgrace that can attach to a compositor, is that of being considered a foul or slovenly workman—to avoid which should be his earnest endeavour ; it would be even better to read every line as he composes it, than to lose so much of his time at the stone, independent of the disgrace attached to a man of this description. We would recommend him to cast his eye over the line as he justifies it ; this method, properly acquired, will not detain him in his work, but will enable him to be much more accurate.

Uniformity in spacing is an important branch of the compositor's business, requiring care and judgment, and ought to be particularly impressed on the mind of the young beginner. Close spacing is as unpleasant to the sight as wide spacing, and ought never to be allowed except in very narrow measures ; and frequently, even then, with care it might be dispensed with. What is commonly termed the composing space, is the best and proper separation between each word ; though this cannot always be adopted in narrow measures, with large letter. It is not merely necessary to have a line here and there uniformly spaced—a careful compositor will be anxious to give to every page that uniformity of appearance which is one of its chief excellences. Careless and foul compositors will never preserve this desirable uniformity ; for when their proofs are crowded with corrections, the utmost care in rectifying those blunders will not make the spacing regular. We must therefore press on the mind of the young beginner this important maxim—That it is better to do little, and to be

determined to do that little *well*, than to be anxious to put together a great number of letters, without any regard to accuracy and uniformity. Authors should send their copy, *finally* corrected, to the press ; for when alterations and additions are made in the proof sheet, it becomes difficult, where there are few paragraphs, to make the spacing equal.

Many compositors, in correcting, do not overrun the matter, as they ought to do, in the stick, but on the stone, and frequently hair-space, or treble-space, a line, in order to get in or drive out a word ; when, by over-running a line or two forward or backward, they might preserve uniformity.

The different sized spaces in a fount of letter have been already noticed ; it is only necessary therefore to observe, that the n-quadrat and hair-space should be kept apart ; the others, viz. the thin, middling, and thick spaces, are generally mixed together, as there is less trouble in justifying by taking them up at random, than when they are all kept separate ; for should there be occasion to alter a thick space to the middling, or, *vice versâ*, it may be necessary to change them all in order to make the line even, when, by taking them up as they occur, there is the greater chance of justifying the line regularly, with the least loss of time.

Where a line is even spaced, and yet requires justification, put the additional space between those words in the line where it will be the least observed, viz. between a d and an h, being perpendicular letters, and will admit of the addition, but not in a greater degree than a middling and thin space to a thick spaced line ; or, after a kerned letter, the beak of which may bear upon the top of a perpendicular, as the f and the h ; but not always after a kerned letter, as the f and the w, where the dis-

tance would be too conspicuous, which is one reason why an n-quadrat should not always be placed after an f, as was formerly directed.

The same rule should be observed where it may be necessary to reduce the spacing of a line; less space is required after a sloping letter than a perpendicular one, and even after a comma, though in regular spacing all points should have an n-quadrat after them, except the full point, which should have an m-quadrat, as terminating a sentence.

Spaces are cast to such a regular gradation, that no excuse can be offered on the part of the compositor, for irregular spacing.

Having made these preliminary and most essential remarks, we shall proceed. Should the length of the page be left to the discretion of the compositor, he sets so many lines as he conceives a fair proportion, which is generally considered as double its width, then places the head and direction line (if any) to it, and cuts an exact gauge.—This is done before he makes up the first page, as that will vary according to the different founts there must necessarily be in it.

Head-lines are generally set in small capitals of the same fount, or in italic. Capitals of letter about three sizes smaller than the body of the work, with folios of a proportionable size, have a much neater appearance than either of the foregoing. If only folios are placed at the top of the page, it is better to make use of full-faced figures, without parentheses or crotchets.

Direction words at the bottom of the page are not now generally used; the omission of them does not injure the appearance of the work, but saves time and expense where overrunning occurs in the proof; nevertheless, in

making up the page, it is necessary to substitute a white line for the signature, volume, &c. Also, in twelves and eighteens, two white lines should be added to the page, one for the signature, and the other for convenience in case of cuts or additions from the author; but it should be observed, that the extra white line must be allowed in the gauge of the furniture, and not cast up in the price of the page.

Compositors formerly experienced much trouble and loss of time in making up the first page of a work, by introducing heavy head-pieces formed of different bodied flowers. This taste for flowery decorations is deservedly exploded, and it is now only necessary to set the title of the work in a neat type. The setting of titles must depend on the fancy and ingenuity of the compositor, and therefore no fixed or certain rule can be laid down for this purpose.

The compositor should be acquainted, on beginning a work, with the number of volumes it is to consist of, that the first page of each sheet may contain the volume to which it belongs, in the left hand corner of the signature line. Signatures are generally set in small capitals; and where they run through the alphabet, the best method is to begin the second alphabet with 2 A, 2 B, and so on.

The title, preface, &c. of a volume is always left till the body of the work is finished, as many circumstances may alter the author's original preface, date, &c. or the work may conclude in such a manner as to admit of their being brought in at the end, in order to make a complete sheet, which may save both paper and press-work. For this reason it is customary to begin the first sheet of every work with the signature B, leaving A for the title sheet. To a sheet of octavo, two signatures are all that are necessary, and are placed to the first and third pages;

to a sheet of twelves, three signatures, and are placed to the first, third, and ninth pages, in the following manner; B, B 2, B 3.

In magazines, and works of that nature, printed in half sheets, figures are sometimes put instead of letters, for signatures. This plan is adopted in many respectable houses. It is less liable to cause confusion with the binder, particularly in works of five or six hundred pages.

Instead of beginning the work with a two-line letter, a full faced English capital is much neater, and now generally used. It is placed with its body rising above the line, yet at the same time exactly ranging with the beard of the bottom of the line; the remainder of the word following this letter may be set either in capitals or small capitals.

We now proceed to the second page, and set the running title in a neat letter, proportioned to the size of the page; but this must be governed by the quantity of matter necessary to be introduced at the head of the page. A full line, as a running title, has a clumsy appearance, and should be avoided if possible. To a solid page, two leads make the usual white after the head; to a single-leaded page, three leads or a long-primer white; and to a double leaded page, a pica white.

It has long been, and still is a practice too prevalent among compositors, to drive out a word at the close of a paragraph, or even to divide it, in order to reap the advantage of a break line. Part of a word, or a complete word in a break line, if it contain no more than three or four letters, is improper. It should be the business of the corrector, at all times, to notice this encroachment. The last line of a paragraph should not on any account begin a page, neither should the first

line of a paragraph come at the bottom of a page, if the work has white lines between the breaks. To obviate which, the compositor may make his page either a line short or long, as most convenient, only taking care that the page which backs it corresponds, so that the page may not have the appearance of differing from its proper length.

If the work is very open, consisting of heads, whites, &c. the compositor must be particularly attentive to their depth; so that though the white may be composed of different sized quadrats, yet that their ultimate depth shall be equal to the regular body of the type the work is done in; for unless care is taken in this particular, the register of the work must be incomplete. The pressman cannot make the lines back if the compositor is not careful in making up his matter.

The first line of a new paragraph is indented an m-quadrat, of whatever size the letter of the work may be. Authors vary very materially in the mode of making paragraphs; some carry the argument of a position to a great length, before they relieve the attention of the reader; while others break off almost at every place that will admit only of a full point. But in this case we follow the author's plan, unless, upon particular occasions, it may be necessary to multiply or reduce the breaks in the copy, if it can be done with propriety, in order to make the work look uniform. Authors should always make the beginning of a new paragraph conspicuous to the compositor, by indenting the first line of it far enough to distinguish it from the preceding line, in case it should be quite full.

Many hints, in addition to what have already been dropped, relative to composing, may be added for the information of learners, were we not persuaded that prac-

tice and a close attention to the mode of doing business by good workmen, will be of more service to them than a multiplicity of rules. It is the duty of the person under whose tuition an apprentice is placed, to discharge that trust with fidelity. The youth's future prospects in life depend in a great measure on the principles on which his first instructions are formed ; and it is the duty of every man to correct those habits in youth which may be improper, whether arising from carelessness or any other cause. When a youth makes choice of a profession, and is aware that his future support and prospects in life must depend on a correct knowledge of that profession, he should be anxious to attain that knowledge ; to withhold it, therefore, from him, or to allow him in improper habits, without checking them, is both unpardonable and unjust.

After the body of a volume is completed, the contents sometimes follow next, though they belong more properly to the beginning of the work ; and for this reason we shall defer speaking of them here, but introduce them in their proper place. The index is generally placed at the end of the volume, and set in letter two sizes less than that of the work ; it is always begun upon an uneven page. Running titles may be set to an index, but folios are seldom put to them, unless it is to recommend the book for its extraordinary number of pages ; for as an index does not refer to its own matter by figures, they are needless in this case. The signatures however are always carried on regularly to the last whole or half sheet of the work.

It was formerly the plan to set the subject word of each article in *Italic*, and all the rest in *Roman*, indenting all the matter an m-quadrat that makes above one line, what is technically termed—to run out and indent ; but

the Italic is now in a great measure exploded, it being attended with extra trouble, and at the same time destroys the uniformity of the page.

Care should be taken that the subject words are ranged alphabetically, as it is not expected that the compositor will transpose his matter afterwards, which is attended with loss of time, without being paid for it.

Where figures have a regular succession, a comma is put after each folio ; and where their order breaks off, a full point is used. Thus, for example, after 5, 6, 7, 8, commas are put ; and after 12. 16. 19. 24. full points ; but to save figures and commas, the succession of the former is noticed, by putting a rule betwixt the first and last figures, thus ; 5—8. Again, if an article has been collected from two pages, the folio of the second is supplied by *sq.* or *sequente* ; and by *sqq.* or *sequentibus*, where an article is touched upon in different succeeding pages. A full point is not put after the last figures, because it is thought that their standing at the end of a line is a sufficient stop. Neither is a comma or a full point placed to the last word of an article, in a wide measure and open matter ; but it is not improper to use a comma at the end of every article in narrow columns, or where figures are put after the matter, instead of running them to the end of the line.

At the conclusion of the index, the volume is considered as completed, with the exception of the title, preface, &c. A compositor's first consideration, then, is in what manner the work has ended, what number of pages the titles, &c. will make, and whether he can impose them in such a form as to save paper or press-work. To answer this purpose, a preface may be drove out or got in ; or if matter is wanting, it is customary to set a half title.

The method of setting or displaying a title page is governed entirely by fancy ; and in this country the style is much altered for the better, of late years, as a comparison between the title pages of the last and the present century will fully prove. No fixed rules for instruction on this head can be laid down, as it depends so much on the taste and ingenuity of the compositor ; we shall therefore recommend the learner, as a help or guide to him in this part of his business, to refer to printed titles, which are considered neatly executed. It would be desirable, if our limits could admit of it, to give specimens of some of this description, that they might be readily referred to at all times.

Authors should endeavour to make their title pages as short and concise as possible, for a crowded title can never be displayed with elegance or taste.

The dedication generally follows the title, and seldom exceeds one page. It should be set in capitals and small capitals, displayed in the manner of a title : but where it extends to a considerable length, it is generally set in a letter two sizes larger than the work. There is neither folio nor direction line required to it, where it does not exceed a page ; but if it happens to be the third page of the sheet, the signature must be inserted.

Formerly, the preface was uniformly set in *Italic* ; at present, this plan is seldom adopted, and *Roman* is used in its stead, of one size larger than the body of the work. The running title to the preface is commonly set in the same manner as those of the body of the work, at the same time the folios are put in numeral letters beginning with *ii* over the second page, and continue the rest in the usual manner. If the work itself was printed with folios only, then the preface should have them also in the middle of the line.

The title, dedication, preface, introduction, &c. form what is called the title sheet, viz. signature A, which makes the booksellers' alphabet (consisting of 23 letters) complete, provided that the body of the work begins with B. To ascertain more readily how many sheets a book consists of, more than are marked with signatures in capitals or small capitals, a lower case Roman a is put to the first sheet after the title sheet, and thus carried on till the beginning of the body of the work.

What has been observed concerning prefaces, relates equally to introductions, drawn up and intended to elucidate their respective works.

The contents follow the preface or introduction, and are either set in Roman or Italic, generally of a size smaller than the body of the work ; the first line of each summary full, and the rest indented an m-quadrat, with the referring figures justified at the ends of the respective lines.

The errata are put immediately before the body of the work, or at the end of it. It is most devoutly to be wished, that works could issue from the press perfectly free from errors ; but we may say with Pope—

Whoever thinks a faultless piece to see,
Thinks what ne'er was, nor is, nor e'er shall be.

Fewer mistakes would be made, were authors to endeavour to render their copy more legible, before they place it into the hands of the printer. It can hardly be expected that the corrector, under whose inspection such a variety of subjects are continually passing, should be able to enter thoroughly into every one of them, and to guess so nicely at the author's meaning, when the copy is obscure, and unable to afford him any assistance.—

Besides, every form is exposed to accidents which can seldom be detected, as it passes through the hands of the pressman. Letters are sometimes drawn out by the balls, and others battered in moving and unlocking the form, in order to make register.

The errata should consist of such corrections only, as are *indispensably necessary*, without noticing any defects in the punctuation, unless where the sense is perverted.

CHAP. VII.

*Of Imposing.*

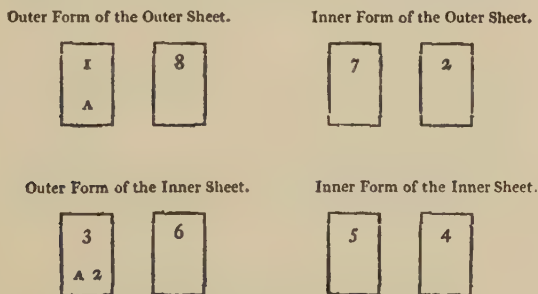
IMPOSING comprehends not only the knowledge of placing the pages that they may, after they are printed off, follow each other regularly, but also the manner of dressing the furniture, and making the proper margin.

Having composed as many pages as make a whole sheet, half sheet, or less part of a sheet, of whatever size, they are taken from under the frame, and carried to the imposing stone; taking care to put the first page in its right position, with the signature to the left hand, facing us, according to the following schemes.

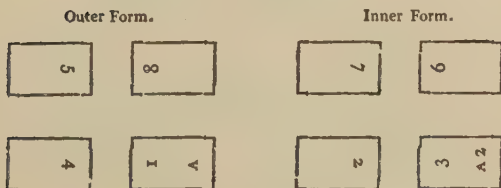
A Sheet in Folio.



Two Sheets in Folio, Quired, or lying one in another.*



A Sheet of Common Quarto.



* Imposing in quires may be carried to any extent, by observing the following rule:--- suppose the work to consist of 32 pages, or 8 sheets, then, any two pages whose united numbers make 33, are to be imposed together; as, 1, 32---19, 14---12, 21, &c.

There must be less furniture in the backs of the inner sheet than the outer, to allow for stitching.

A Sheet in Broad Quarto.

Outer Form.		Inner Form.	

Two Half Sheets in Quarto, worked together.

Outer Form.		Inner Form.	

Half a Sheet of Common Quarto.

A Sheet of Common Octavo.

Outer Form.				Inner Form.			

A Sheet of Broad Octavo.

Outer Form.

13	12	9	16
4	5 A 3	8	1 V 1

Inner Form.

15	10	11	14
2	7 A 4	6	3 A 2

Half a Sheet of Common Octavo.

Two Quarters of a Common Octavo.

4	5	6	3 A 2
1 V	8	7	2

2	3	4	1 B
1 V	4	3	2

Two Half Sheets of Common Octavo, worked together.

Outer Form.

4	5	8	1 B
1 V	8	5	4

Inner Form.

2	7	6	3 A 2
3 B 2	6	7	2

Sheet of Octavo with Two Signatures—12 concluding pages of a work, and 4 of other matter.

Outer Form.

2	3	8	5 v
1	12	9	4
A			

Inner Form.

9	7	4	2
3	10	11	1
A 2			

A Sheet in Octavo, of Hebrew Work.

Outer Form.

5	21	6	8
4	13	16	1
			NN

Inner Form.

7	10	11	9
2	15	14	3
			2N

A Sheet of Twelves.

Outer Form.

21	31	61	5 v
8	17	20	5
1	24	21	4
A			

Inner Form.

10	91	14	11
9	19	18	7
3	22	23	2
A 2			

A Sheet of Twelves without cutting.

Outer Form.

5 A 3	20	17	8
4	12	16	9
1 A	24	13	12

Inner Form.

7	18	19	6
10	15	22	2 A 2
11	14	23	2

A Sheet of long Twelves.

Outer Form.

1 A	4
16	13
6	12
8	6 A 3
17	20
24	21

Inner Form.

2 A 2	2
14	15
11	10
9	7 A 4
19	18
22	23

*Half Sheet of Twelves
without Cutting.*

5	8	7	6
4	9	10	3
1	12	11	2
A			

*A Common Half Sheet
of Twelves.*

6	7	8	5v
			5
4	9	10	2v
			3
1	12	11	2
A			

*Half Sheet of Twelves with Two Signatures—being
8 concluding pages of a work, and 4 of other matter.*

2	3	4	2
			1
4	5	6	2v
			3
1	8	7	2
A			

One-third, or 8 pages of a Sheet of Twelves.

To be imposed in the Off-cross.

Outer Form.

1	8	5	4
A			

Inner Form.

3	6	7	2
A 2			

A Sheet in Twelves, with Two Signatures.

Outer Form.

20	21	24	25
8	9	12	5
1	16	13	4

Inner Form.

18	23	22	19
6	11	10	7
3	14	15	2

Two Half-sheets of Twelves worked together.

Outer Form.

6	7	6	7
4	9	4	9
1	12	1	12

Inner Form.

8	5	8	5
10	3	10	3
11	2	11	2

A Sheet in Sixteens, with One Signature.*

Outer Form.				Inner Form.			
4	29	28	5	6	27	30	3 A 2
13	20	12	12	11	22	19	14
16	17	24	9	10	23	18	15
1 A	32	25	8	7	26	31	2

A Half Sheet in Sixteens.

1 A	8	7	2
16	6	10	15
13	12	11	14
4	5	6	3 A 2

* A sheet in sixteens, with two signatures, is imposed as two sheets of common octavo, putting the first signature for the one half sheet where A stands above, and the first page of the other half sheet in the place where the fifth page is.

A Sheet of Eighteens, with One Signature.

Outer Form.			Inner Form.		
1 A	8	01	13 A 7	91	81
36	62	72	24	12	61
33	23	92	3 A 2	9	21
4	3 5	9 11	34	13	52
23	22	02	35	03	82
14	8 51	6 71	2	4 7	5 6

A Sheet of Eighteens, with Two Signatures.

Outer Form.			Inner Form.		
1 A	8	8	11	01	2
24	71	3 5	14	51	11
21	02	4	3 A 2	9	01
4	3 5	5 6	22	61	2 3
13	91	21	23	81	9
12	5 6	1 8	2	4 7	4 7

A Sheet of Eighteens, with Three Signatures.

Outer Form.			Inner Form.		
I A	I B	I C	7 A 4	7 B 4	7 C 4
12	12	12	6	6	6
9	9	9	3 A 2	3 B 2	3 C 2
4	4	4	10	10	10
5 A 3	5 B 3	5 C 3	11	11	11
8	8	8	2	2	2

A Sheet of Eighteens, to be folded up together.

Outer Form.			Inner Form.		
1 A	4	5 A 3	23	22	19
36	33	32	14	51	18
25	82	29	11 A 7	01	7 A 4
12	5 V 6	8	26	62	30
13	91	17	35	43	31
24	15	20	2	2 V 3	6

A Half Sheet of Eighteens.

14	3 v 5	10	5 v 6	9	31
4	15	12	4 v 7	16	22 3
1 v	18	11	8	17	2

Note.---The white paper of this form being worked off, the four lowermost pages in the middle must be transposed; viz. pages 8, 11, in the room of 7, 12, and pages 7, 12, in the room of 8, 11.

A Half Sheet of Eighteens, without transposing the pages.

6	7	18	5 17	8	3 v 5
4	9	16	15	10	3
1 v	12	13 B	14	11	2

Sixteen Pages to a Half Sheet of Eighteens.

21	3 v 5			9	11
4	13	8	5 v 6	14	2 v 3
1 v	16	7 v 4	10	15	2

Note.—The white paper of this half sheet being worked off, the middlemost pages must be transposed; viz. pages 7, 10, in the room of 8, 9, and pages 8, 9, in the room of 7, 10.

A Sheet of Twenties.

Outer Form.

Inner Form.

20	21	24	17	18	23	22	19
5 v 3	36	33	8	7 v 4	34	35	6
16	25	28	7 v 13	14	27	26	8 v 15
9 v 5	32	29	12	11 v 6	30	31	10
1 v	40	37	4	3 v 2	38	39	2

A Sheet of Twenty-fours, with Two Signatures,

Outer Form.

12	13	16	9 A 5	36	37	40	33 B 5
8	17	20	5 A 3	32	41	44	29 B 3
I A	24	12	4	52 B	84	45	82

Inner Form.

34	39	38	35	10	15	14	11 A 6
30	43	42	31 B 4	6	19	18	7 A 4
27 B 2	94	47	92	3 A 2	22	23	2

A common Half Sheet of Twenty-fours.

21	31	91	5 v 6	101	51	14	9 v 11
8	17	20	3 v 5	6	19	18	4 v 7
1 v	24	12	4	3 v 2	22	23	2

A Half Sheet of Twenty-fours, the Sixteen-way.

2	23	22	2 v 3	16	5 v 9
7 v 4	81	91	9	13	12
8	17	20	3 v 5	14	6 v 11
1 v	24	12	4	15	10

A Half Sheet of Twenty-fours, with Two Signatures.

18	23	22	19 B 2	20	21 B 3	24	17 B
8	9 A 5	12	5 A 3	6	11	10	7 A 4
1 A	16	13	4	3 2 A	14	15	2

A Half Sheet of Twenty-fours, without Cutting.

5 A 3	20	17	8	7 A 4	18	19	6
4	21	16	9 A 5	10	15	22	3 A 2
1 A	24	13	12	11 A 6	14	23	2

A Half Sheet of Long Twenty-fours.

2	51	10	7 v 4	18	32
3 v 2	14	11	9	19	22
4	13	12	5 v 3	20	21
1 v	16	6 v 5	8	17	24

A Half Sheet of Thirty-twos.

18	31	30	19	20	29	32	17
23	26	27	22	21	28	25	24
8	9 v 5	12	5 v 3	6	11 v 9	10	7 v 4
1 v	16	13 v 7	4	3 v 2	14	15 v 8	2

A Sheet of Thirty-twos.

Outer Form.

4	19	63	62	28	37	09	5 v 3
13	52	45	20	21	44	53	12
7 v 1							
91	49	48	9 v 1	24	41	56	5 v 6
1	64	33	32	25	40	57	8
v 1							

Inner Form.

9	59	38	27	30	35	29	2 v 3
11	54	43	22	19	46	15	14
6 v 1							
10	55	42	23	18	47	50	8 v 15
7	58	39	26	31	34	63	2
4 v 1							

A Sheet of Thirty-twos, with Four Signatures.

Outer Form.

50	39	62	D 2 51	36	45	48	C 33
55 D 4	58	59	54	37 C 3	44	41	40
8	9	12	A 3 5	22	27	26	B 4 23
I A	91	13	4	61 B 2	30	13	81

Inner Form.

34	47	46	C 2 35	52	61	64	D 49
39 C 4	42	43	38	53 D 3	50	57	95
24	25	28	B 3 21	6	11	10	A 4 7
17 B	32	29	20	3 A 2	14	15	2

A Half Sheet of Thirty-twos, with Two Signatures.

81	31	30	19 B 2	20	29	32	17 B
23 B 4	26	27	22	21 B 3	28	25	24
8	9	12	5 A 3	6	11	10	7 A 4
1 A	16	13	4	3 A 2	14	15	2

A Common Half Sheet of Thirty-twos.

4	29	28	5 A 3	6	27	30	3 A 2
13 A 7	20	18	12	11 A 6	22	6	41
16	17	4	9 A 5	10	23	18	15 A 8
1 A	32	25	8	7 A 4	26	31	2

A Half Sheet of Thirty-sixes.

2	7 A 4	9 A 5	01	8	1 A
35	30	28	22	29	36
43	31	25	26	23	33
2 V 3	6	12	9 V 11	3 V 5	4
42	21	19	02	22	23
2 V 31	16	18	6 V 41	8 V 51	14

A Half Sheet of Thirty-sixes, with Two Signatures.

2	7 A 4	25 B	26	8	1 A
32	18	36	35	41	24
22	19	33	43	02	21
2 V 3	6	28	2 B 22	3 V 5	4
91	13	31	32	41	15
5 V 6	12	30	3 B 62	9 V 11	10

A Half Sheet of Thirty-sixes, without Cutting.

1 A	4	5	9	3 A2	2
36	33	32	13	34	35
25	28	29	03	27	26
12	5V 6	8	4V 7	10	9V 11
13	91	17	81	15	14
24	12	20	61	22	23

A Half Sheet of Forties.

20	21	24	17	18	23	22	19
5 3V	36	33	8	7 4V	34	35	9
16	25	28	13 A7	14	27	26	15 A8
9 5V	32	29	12	11 9V	30	31	10
1 V	40	37	4	3 2V	38	39	2

A Half Sheet of Forty-eights, with Two Signatures.

2	23	22	3 A 2	26	47	46	27 B 2
7 4 V	81	61	9	13 4 B	42	43	30
11 9 V	41	51	01	35 9 B	38	39	34
12	13	16	9 A 5	36	37	40	33 B 5
8	17	20	5 A 3	32	41	44	29 B 3
1 4 V	42	12	4	52 B	84	54	82

A Quarter Sheet of Forty-eights, with Two Signatures.

18	23	22	19 2 2	20	21	24	17 2
8	9	12	5 A 3	6	11	10	7 A 4
1 A	16	13	4	3 A 2	14	15	2

A Half Sheet of Forty-eights, with Three Signatures.

34	47	46	35 c 2	45	48	33	48
39	42	43	38	37 c 3	44	41	40
18	31	30	19 B 2	20	29	32	17 B
23	26	27	22	12 B 3	28	25	24
8	9	12	5 A 3	6	11	10	7
1 V	16	13	4	3 V 2	14	15	2

A Quarter Sheet of Sixty-fours.

18	31	30	19	20	29	32	17
23	26	27	22	12	28	25	24
8	9 A 5	12	5 A 3	6	11 A 6	10	7 A 4
1 V	16	13 V 7	4	3 V 2	14	15 V 8	2

A Quarter Sheet of Forty-eights, without Cutting.

2	22	14	6 v 11	12	13	24	v 1
3 v 2	22	15	01	6 v 5	16	12	4
6	19	18	v 4 7	8	17	20	v 3 5

A Common Quarter Sheet of Forty-eights.

12	13	16	v 5 9	10	15	14	v 6 11
8	17	20	v 3 5	6	19	18	v 4 7
1 v	24	12	4	3 v 2	22	23	2

A Common Quarter Sheet of Sixty-fours.

4	29	28	v 3 5	6	27	30	v 2 3
13 v 7	02	12	12	11 v 9	22	61	41
16	17	24	v 5 9	10	23	18	v 8 15
1 v	32	25	8	7 v 4	26	31	2

A Half Sheet of Sixty-fours.

2	63	34	31	26	39	58	7 v 4
15 v 8	50	47	18	23	42	55	10
14	51	46	19	22	43	54	11 v 6
3 v 2	29	35	30	27	38	65	9
4	61	26	29	28	37	60	5 v 3
13 v 7	52	45	20	12	44	53	12
16	49	48	17 v 9	24	41	56	6 v 5
1 v	64	33	32	25	40	57	8

A Half Sheet of Ninety-sixes, with Six Signatures.

99	64	84	23	49	18	28	56	16	23	89	44	08	59
71	74	75	70	85	88	87	90	91	86	69	76	73	72
05	39	29	20	93	54	43	44	84	20	25	19	49	64
55	58	59	54	37	44	41	40	39	38	53	60	57	56
8	6	21	3	22	42	92	42	52	82	9	11	01	4
1	16	13	4	19	30	31	18	17	32	29	20	3	2
A				B				B			A		

A Half Sheet of One Hundred and Twenty-eights.

411	421	921	2 H 511	001	601	211	6 L6	86	111	011	2 G 66	911	521	821	H 311
119 H 4	122	123	118	101 G 3	108	105	104	103 G 4	106	107	102	117 H 3	124	121	120
99	62	82	2 A 19	48	36	96	4 18	28	56	46	2 F 38	89	22	08	3 59
71 E 4	74	75	70	85 F 3	92	89	88	87 F 4	90	91	86	69 E 3	76	73	72
05	39	29	2 G 15	93	54	84	2 33	43	27	94	2 C 53	25	19	49	D 64
55 D 4	58	59	54	37 E 3	44	41	40	39 C 4	42	43	38	53 D 3	60	57	56
8	6	21	3 V 5	22	22	92	4 B 32	42	52	82	3 B 12	9	11	01	4 V 2
1 A	16	13	4	19 B 2	30	31	18	17 B	32	29	20	3 A 2	14	15	2

The preceding schemes will be found to contain every necessary imposition, consisting of folios, quartos, octavos, twelves, sixteens, eighteens, &c. together with many irregular sizes, viz. twenties, thirty-sixes, forties, forty-eights, sixty-fours, seventy-twos, ninety-sixes, and one hundred and twenty-eights; these, and many more irregular sizes may be made, with a view to shew the possibility of folding a sheet of paper into so many various forms. We have also given a plan for imposing a half sheet of cighteens without transposing the pages on the press, which will be found extremely useful, as works in that size are now constantly printing. Much time will also be saved in the warehouse work, for it will now only be necessary to cut the sheet through in the middle, in the same manner as a half sheet of octavo.

It is necessary, before we proceed further on the subject of imposing, to make a few observations on the method of tying up a page, which is done with a piece of fine packthread, turned four or five times round it, and fastened at the right hand corner, by thrusting a noose of it between the several turnings and the matter with a piece of brass rule, and drawing it perfectly tight; taking care, during the whole time, to keep the fore-finger of the left hand tight on the corner, to prevent the page from being drawn aside when the cord is strained.

The page being tied up, the compositor removes it pretty far from the ledges of the galley, to see if the turns of cord lie about the middle of the shank of the letter; if they lie too high, as most commonly they do, he thrusts them lower, and, if the page be not too broad, he places his fore or middle finger, or both, of his right hand, on the right side of the page, and his thumb on the left; then, bending his other fingers under the head of the page, he lifts up the handle end of the galley, with his

left hand, almost upright, and so discharges the galley of the page, by delivering it upright into his right hand.-- Having done this, he puts the fingers of his left hand about the foot of the page, upon the ends of the lines on the right hand side, and his thumb on the left hand side, with the palms of his hands towards the face of the letter, and his other fingers bent under the foot of the page, with the face of the letter from him, and letting it rest upon the inside of his fingers, under the right hand side of the page, he takes a page paper into the palm of his left hand, and puts it against the bottom of the page, and turning his left hand outward, receives the page flat upon the paper on the palm of his hand ; then, with his right hand grasps the sides of the page and the paper, which turns up again above the bottom of the page, and sets it in a convenient place under his frame, placing it on the left hand, with the foot towards him, that the other pages that are in like manner set down afterwards, may stand by it in an orderly succession until he comes to impose them.

If it be a large folio page, or a broadside he has tied up, he cannot take that into his hands, because it is too broad for his grasp ; therefore he carries his galley and page to the correcting stone, and turns the handle of the galley towards him, and taking hold of the handle with his right hand, he places the ball of his thumb on his left hand, against the inside of the head ledge of the galley, to hold it and keep it steady, and by the handle draws the slice with the page upon it, out of the galley, letting the slice rest upon the correcting stone ; then he thrusts the head end of the slice so far upon the correcting stone, that the foot of the page may stand an inch or two within the outer edge of the correcting stone, and placing his left hand against the foot of the page, in the same posture he

last placed it against the head ledge of the galley, he draws the slice from under the bottom of the page.

To return to the subject of imposing:—Sixteens, twenty-fours, and thirty-twos, are but octavos and twelves doubled, or twice doubled, and imposed in half sheets. For example, the sixteens are two octavos imposed on each side the short cross; the twenty-fours are two twelves imposed on each side the long cross, and a thirty-two is four octavos imposed in each quarter of the chase. And thus they double a sheet as often as they think fit. But as we said before, they are imposed on each side the cross, or in each quarter of the chase, as the volume that is doubled or redoubled is imposed in the whole chase.

In half sheets, all the pages belonging to the white paper and reiteration are imposed in one chase. So that when a sheet of paper is printed on both sides with the same form, that sheet is cut in two in the short cross, if quarto or octavo, and in the short and long cross, if twelves, and folded as octavo or twelves.

When a compositor proceeds to impose, he takes up the pages he set by on papers in an orderly succession when he tied them up, grasping the edges of the papers that stick up on both sides of the page tight, that so the bottom of the paper may stand the stronger against the bottom of the letter, to keep it from falling out; and bringing it thus to the correcting stone, he gets the two last fingers of his right hand under the head of the page, but not under the paper sticking up about the head of the page, keeping his other two fingers and thumb on the sides of the page, and slips or slides his left hand, so as the palm of it may turn towards the bottom of the page; and lifting the page upright on his right hand, he dis-

charges his left to take away the paper behind the page ; then he grasps his left hand about the foot end of the page in the same posture that his right hand grasps the head end. Having the page thus between his hands, with the bottom of the letter towards him, he directs both his hands to the place on the stone where the page must stand, and puts it down on the stone so nimbly, that the whole bottom of the page comes all at once to the face of the stone, lest otherwise he endanger the breaking, squabbling, or hanging, &c. of the page. In this manner he lays down all the pages of the form.

In laying down our pages, we place them in the same order as they present themselves upon the press, for turning the paper, either for octavo or twelves. And though compositors do not lay down the pages of some sizes in the same manner, they nevertheless make them have their right succession without embarrassing the pressman.

The pages for a form being put down, we follow them, and see whether the direction answers to the first word of the next following page. But we do not trust to this in work that abounds with titles and heads, where pages often have the same word for their beginning. In this case we justify the number of such pages into the direction lines, rather than run the hazard of transposing them ; since it is more easy to put an n-quadrat into the room of a figure, than to rectify a mistake of that kind after the pages are untied. But in close and ordinary matter we take notice, first, whether the uneven outer pages have their proper signatures ; then, whether the number of an outside page, and the number of the page next to it, amount to one more than there are pages contained in a sheet or half sheet of our work. Thus, for example, in folio, one and four make five ; in quarto, one and eight

make nine ; in octavo, one and sixteen make seventeen. In this manner we may examine every two pages in all other sizes, whether their joint number exceeds the number of pages in a sheet by one ; which, if it does, is a proof that the pages are in their right places.

Being sure that our pages are laid down right, we proceed to dressing of chases, which we will suppose to be for a sheet of octavo. Accordingly we endeavour to come at a good pair of chases, that are fellows, as well in circumference as in other respects ; and having laid them over the pages for the two different forms, we consider the largeness of the paper on which the work is to be done, and put such gutter-sticks betwixt page and page, and such reglets along the sides of the two crosses, as will let the book have proper margins after it is bound. Having dressed the inside of our pages, we proceed to do the same to their outsides, by putting side sticks and foot sticks to them, and when properly secured by the furniture, we begin to untie them, quarter after quarter, the inner page first and then the outer, driving at the same time the letter towards the crosses, and using every other means to prevent it from hanging or leaning ; for which purpose, and to keep it from other accidents, we secure the pages of each quarter by a couple of quoins.

By observing a proper method in cutting up new furniture, the same will be serviceable for other works, as well as the one for which it is intended, even though the size of the page may differ, provided it agrees with the margin of the paper. The gutters should be cut two or three lines longer than the page ; the head-bolts wider ; the back furniture may run down to the rim of the chase, but must be level with the top of the page, which will admit of the inner head-bolt running in ; the difference of the outer head-bolt may go over the side-stick, and the gutter

will then run up between them. The footstick only need be cut exact, and the furniture will completely justify.

The pages of a sheet or half sheet being now dressed, our next business is to make the margin, or to try whether our furniture is so proportioned as that each page may occupy one side of a leaf, so as to have an equal margin of white paper left at the sides as well as at the head and foot thereof.

The method of making margin by rule, is practised by no other printing nation besides the English ; and it would be in vain to persuade printers and booksellers in foreign parts to come into our measures, as to making margin ; since they would disoblige the literati were they to deprive them of a large margin, on which to make their remarks ; and as to narrow gutter-sticks in school books and other circulating works, they are commonly contrived for the joint interest of the printer and proprietor.

To make proper margin, some use the following method, for octavos ; viz. they measure and mark the width of four pages by compasses, on a sheet of paper designed for the work, beginning to measure at the one extremity of the breadth of the sheet. The rest of the paper they divide into four equal parts, allowing two-fourths for the width of two separate gutter-sticks ; the remaining two-fourths they divide again into four equal parts, and allow one fourth for the margin along each side of the short cross, and one fourth for the margin to each outside page. But because the thickness of the short cross adds considerably to the margin, they reduce the furniture in the back accordingly, and thereby enlarge the outside margin, which requires the greatest share, to allow for the unevenness of the paper itself, as well as for pressmen laying sheets uneven, when it is not the fault in

the paper. Having thus made the margin between the pages, to the breadth of the paper, they proportion the margin at the head, in the same manner, to the length, and accordingly measure and mark the length of two pages, dividing the rest into four parts, whereof they allow one fourth for each side of the long cross, and one fourth for the margin that runs along the foot of the two ranges of pages. But though they count each part equal to another, they do not prove so upon examination; for as they did at the short cross, so they lessen the furniture on both sides the long cross, to enlarge the bottom margin, for the same reasons that were assigned for enlarging the side margin.

This being the method that is used by some in making margin to octavos, they go the same way to work in twelves; where their chief care is to fix upon a proper size for the head sticks or bolts; and, according to them, allow in the following manner; viz. for the outer margin along the foot of the pages, the amount of two thirds of the breadth of the head sticks, and the same for the inner margin, that reaches from the foot of the fifth page to the centre of the groove for the points; and from the centre of that groove to the pages of the quire, or that cut off, they allow half the breadth of the head stick. As to the margin along the long cross, it is governed by the gutter sticks; and it is common to put as much on each side of the long cross as amounts to half the breadth of the gutter-stick, without deducting almost any thing for the long cross, since that makes allowance to answer the outer margin—exposed to the mercy both of the pressman and book-binder.

Thus much may suffice about making margin the above way; which, though it is different from what others use, is nevertheless the basis for making proper margin. Some compositors make margin in the

following manner. Having dressed their chases with suitable furniture, for octavo, they fold a sheet of the right paper to that size; then, opening it to the size of a leaf in quarto, they lay one extremity of it against the folio side of the fifteenth page, if it be an inner form, or against the folio side of the thirteenth page, if it be an outer form, to observe whether the opposite extremity of the paper, folded in quarto, reaches to and fairly covers the third, or the first page, according to the form under hand; which, if it does, proves the margin of that quarter to be right, and that the others may be adjusted to that. Having in this manner made the margin to the breadth of the paper, they proportion it to the length, by trying whether the depth of the paper, folded in quarto, reaches to and fairly covers the bottom line of the fifteenth or of the thirteenth page, when the upper end of the paper, folded in quarto, is laid against the back of the running title of the tenth or of the twelfth page; which, if it does, proves that the margin to the length of the page is right. In making margin, we should always take care that the gutter-sticks be of a proper breadth, which may be tried by holding one end of the paper, folded in quarto, to the centre of the groove in the short cross, to observe whether the fold for octavo falls in the middle of a gutter-stick; which, if it does, proves that the gutter-stick is of a proper size. In this manner we may also try the margin of twelves and other sizes; for having folded with exactness a sheet of the right paper to the work, one quarter of a chase may be first dressed, and the margin to it made before we go further; for if the foldings fall in the middle of the respective parts of the furniture, it proves that the margin is right throughout.

The chases being now dressed, and the proper margin made, nothing remains but quoining and locking up the

forms. But before this is done, we cut slips of scaleboards, of which we put one, or sometimes more, along both sides of the long as well as of the short cross; not on account of enlarging the margin, but to supply the inequality of one cross to another, and to assist the pressman in making register; for though we find some so very nice, as to fancy here a thin scaleboard too much, and there one too little, it amounts to no more than mere imagination, and, perhaps, a shew of authority; considering, that the very parts of the paper whose margin is adjusted by scaleboards, are subject to the bookbinder's plough; and that it is dubious whether he will have the same regard to margin with the printer; for we are induced to think, that the abolishing of large outside margin is owing to some penurious book-binders, who gave themselves more concern about white paper shavings, than the handsome appearance of a book; hence, to prevent books from being spoiled in this manner, it is usual in Germany to make the title-page considerably wider and longer than those of the work, which sometimes has a good effect.

All that has been said concerning making of margin, relates properly to imposing the first sheet of a work; for after that is true dressed, a second, or more sheets, may be dressed with less trouble; for then we impose from wrought-off forms, where we have nothing else to do but to put the chase and furniture about the pages, in the same manner as we take it off the form we are stripping; after which we put the running titles over the pages, and untie them, to make room for the quoins, which we put to each quarter in the same order as we take them off the form we impose from.

In order to be accurate in altering the folios of the respective pages, according to their regular succession, we have arranged the following table,

A Table of Signatures and Folios,

Extended to Four Alphabets.

No. Sheets.	Signature.	Folio.	Quarto.	Octavo, Sheets.	Octavo, Half-sheets.	Twelves, Sheets.	Twelves, Half-sheets.	Eighteens.	
1	A	0	0	0	0	0	0		
2	B	1	1	1	1	1	1	B	1
3	C	5	9	17	9	25	13	E	37
4	D	9	17	33	17	49	25	H	73
5	E	13	25	49	25	73	37	L	109
6	F	17	33	65	33	97	49	O	145
7	G	21	41	81	41	121	61	R	181
8	H	25	49	97	49	145	73	U	217
9	I	29	57	113	57	169	85	Z	253
10	K	33	65	129	65	193	97	2C	289
11	L	37	73	145	73	217	109	F	325
12	M	41	81	161	81	241	121	I	361
13	N	45	89	177	89	265	133	M	397
14	O	49	97	193	97	289	145	P	433
15	P	53	105	209	105	313	157	S	469
16	Q	57	113	225	113	337	169	X	505
17	R	61	121	241	121	361	181	3A	541
18	S	65	129	257	129	385	193	D	577
19	T	69	137	273	137	409	205	G	613
20	U	73	145	289	145	433	217	K	649
21	X	77	153	305	153	457	229	N	685
22	Y	81	161	321	161	481	241	Q	721
23	Z	85	169	337	169	505	253	T	757
24	2A	89	177	353	177	529	265	Y	793
25	B	93	185	369	185	553	277		
26	C	97	193	385	193	577	289		
27	D	101	201	401	201	601	301		
28	E	105	209	417	209	625	313		
29	F	109	217	433	217	649	325		
30	G	113	225	449	225	673	337		
31	H	117	233	465	233	697	349		
32	I	121	241	481	241	721	361		
33	K	125	249	497	249	745	373		
34	L	129	257	513	257	769	385		
35	M	133	265	529	265	793	397		
36	N	137	273	545	273	817	409		
37	O	141	281	561	281	841	421		
38	P	145	289	577	289	865	433		
39	Q	149	297	593	297	889	445		
40	R	153	305	609	305	913	457		
41	S	157	313	625	313	937	469		
42	T	161	321	641	321	961	481		
43	U	165	329	657	329	985	493		
44	X	169	337	673	337	1009	505		
45	Y	173	345	689	345	1033	517		
46	Z	177	353	705	353	1057	529		

A Table of Signatures and Folios,

Continued.

No. Sheets.	Signature.	Folio.	Quarto.	Octavo, Sheets.	Octavo, Half-sheets.	Twelves, Sheets.	Twelves, Half-sheets.	
46	3A	181	361	721	361	1081	541	
47	B	185	369	737	369	1105	553	
48	C	189	377	753	377	1129	565	
49	D	193	385	769	385	1153	577	
50	E	197	393	785	393	1177	589	
51	F	201	401	801	401	1201	601	
52	G	205	409	817	409	1225	613	
53	H	209	417	833	417	1249	625	
54	I	213	425	849	425	1273	637	
55	K	217	433	865	433	1297	649	
56	L	221	441	881	441	1321	661	
57	M	225	449	897	449	1345	673	
58	N	229	457	913	457	1369	685	
59	O	233	465	929	465	1393	697	
60	P	237	473	945	473	1417	709	
61	Q	241	481	961	481	1441	721	
62	R	245	489	977	489	1465	733	
63	S	249	497	993	497	1489	745	
64	T	253	505	1009	505	1513	757	
65	U	257	513	1025	513	1537	769	
66	X	261	521	1041	521	1561	781	
67	Y	265	529	1057	529	1585	793	
68	Z	269	537	1073	537	1609	805	
69	4A	273	545	1089	545	1633	817	
70	B	277	553	1105	553	1657	829	
71	C	281	561	1121	561	1681	841	
72	D	285	569	1137	569	1705	853	
73	E	289	577	1153	577	1729	865	
74	F	293	585	1169	585	1753	877	
75	G	297	593	1185	593	1777	889	
76	H	301	601	1201	601	1801	901	
77	I	305	609	1217	609	1825	913	
78	K	309	617	1233	617	1849	925	
79	L	313	625	1249	625	1873	937	
80	M	317	633	1265	633	1897	949	
81	N	321	641	1281	641	1921	961	
82	O	325	649	1297	649	1945	973	
83	P	329	657	1313	657	1969	985	
84	Q	333	665	1329	665	1993	997	
85	R	337	673	1345	673	2017	1009	
86	S	341	681	1361	681	2041	1021	
87	T	345	689	1377	689	2065	1033	
88	U	349	697	1393	697	2089	1045	
89	X	353	705	1409	705	2113	1057	
90	Y	357	713	1425	713	2137	1069	
91	Z	361	721	1441	721	2161	1081	

The running titles, with the right folios to them, being put to the pages, we proceed to locking up our forms ; first carefully examining whether the pages of each quarter are of an exact length, for the difference even of a lead will cause them to hang. We ascertain their exactness by placing the ball of each thumb against the centre of the foot-stick, raising it a little with the pressure, and if the ends of both pages rise equal with the stick, it is a proof they will not bind ; we then fit quoins betwixt the side and foot stick of each quarter, and the chase, till the whole form may be raised. And though locking up a form may be thought a trifling function, it demands our attention nevertheless in several instances. When we have pushed the quoins as far as we can, with our fingers, we make use of the mallet and shooting stick, and gently drive the quoins along the side sticks at first, and then those along the foot sticks, taking care to use an equal force in our strokes, and to drive the quoins far enough up the shoulders of the side and foot sticks, that the letter may neither belly out one way, nor hang in the other ; and as to the lower quoins, they ought likewise to be driven to a station where they may do the office of keeping the letter straight and even. And here we venture to disapprove the custom of slanting quoins on both sides, and planing their edges and corners off, whereby all the beveled-off parts are rendered ineffectual to do the office of a quoin or wedge ; for the slanted side of a quoin running against the square side of the chase, must needs carry a cavity with it, and consequently be void of binding with equal force in every part ; whereas, in our opinion, it would deserve the name of an improvement, were quoins slanted on one side only, and their gradation and variety of sizes preferred to superficial neatness, which answers no other end than that of making the beveled-off

parts of a quoin useless, and incapable of doing the same execution with a plain one, that binds and bears alike in all its parts. As to the edges that are planed off across the two ends of a quoin, the want of them causes the shooting-stick to fly off the quoin almost at every hard stroke of the mallet, because the quoin end of the shooting-stick is rounded off; for which reason we should choose to have that end made of a forked, or else of a square form, to be of greater service in unlocking a form.

It often occurs, that the quoins from having been locked up wet, stick so tight to the furniture as to render it troublesome to unlock them; in such cases the inconvenience is remedied by driving the quoin up instead of down, which immediately loosens it, and it unlocks with ease.

Our form, or forms, being now locked up, and become portable, we deliver them to the pressmen to pull a proof of them. But here we must notice a corruption that prevails with some pressmen, in turning the term of *first* proof into that of *foul* proof, and often pull the proofs accordingly; whereas even a slight knowledge of printing is sufficient to judge that a proof sheet ought to be pulled as clean and as neat as any sheet in a heap that is worked off. Hence it is a rule with careful pressmen, not to give proofs a high colour, nor to use very wet paper for them, but instead of these easements to give them a long and slow pull, that the matter may come off clean and fair, so that every letter may appear full and plain; after which the forms are rubbed over with a wet lie-brush; then carefully taken off the press, and the proof and forms delivered to the compositor's further care.

CHAP. VIII.

*Correctors and Correcting.*

IT has ever been the pursuit of eminent printers to aim at accuracy, by their particular care that the effects of their profession should appear without faults and errors, not only with respect to wrong letters and false spelling, but chiefly in regard to their correcting and illustrating such words and passages as are not fully explained or expressed, or are obscurely written in the copy. The office of corrector is not to be conferred on one that has merely a tolerable judgment of his mother tongue ; but who has some knowledge of such languages as are in frequent use, viz. Hebrew, Greek, Latin, French, Italian, and German, and possesses a quick and discerning eye—these are the accomplishments by which a corrector may raise his own and his master's credit ; for it is a maxim with booksellers to give the first edition of a work to be done by such printers whom they know to be either able correctors themselves, or that employ fit persons, though

not of universal learning, and who know the fundamentals of every art and science that may fall under their examination. We say, examination ; for in cases where a corrector is not acquainted with the subject before him, he, together with the person that reads to him, can do no more than literally compare and cross-examine the proof by the original, without altering either the spelling, or punctuation ; since it is an author's province to prevent mistakes in such case, either by delivering his copy very accurate, and fairly written, or by carefully perusing the proof sheet. But where a corrector understands the language and characters of a work, he often finds occasion to alter and to mend things that he can maintain to be either wrong, or else ill digested. If therefore a corrector suspects copy to want revising, he is not to postpone it, but to make his emendations in the manuscript before it is wanted by the compositor, that he may not be hindered in the pursuit of his business, or prejudiced by alterations in the proof, especially if they are of no real signification ; such as far-fetched spelling of words, changing and thrusting in points, capitals, or any thing else that has nothing but fancy and humour for its authority and foundation.

What is chiefly required of a corrector, besides espying literal faults, is to spell and point after the prevailing method and genius of each particular language : but these being two points that never will be reconciled, but always afford employment for pedantic critics, every corrector ought to fix upon a method to spell ambiguous words and compounds always the same way. And that the compositors may become acquainted with and accustomed to his way of spelling, the best expedient will be to draw out, by degrees, a catalogue of such ambiguous words and compounds.

As it is necessary that correctors should understand languages, so it is requisite that they should be acquainted with the nature of printing, else they will be apt to expose themselves in objecting against several things that are done according to method and practice in printing. It is for this reason that correctors in most printing houses are chosen out of compositors that are thought capable of that office, and who know how not only to correct literal faults, but can also discern where improprieties in workmanship are used; which cannot be expected in gentlemen who have not a sufficient knowledge of printing; and it would be very ungenerous in a compositor to swerve from the common rules in practice, because the corrector is not printer enough to find fault with it.

Doubts have often arisen in what cases to *double* the final consonant of verbs in the past tense and both participles; also the final consonant of irregular verbs in the active participle; a list therefore of such verbs will be found useful.

Abet, abetted	Bethral, bethralled	Cod, coddled	Disannul, disannulled
Abhor, abhorred	Betrim, betrimmed	Cog, coggled	Discounsel, discour-
Abut, abutted	Bias, biassed	Commit, committed	selled [thrall
Acquit, acquitted	Bib, bibbed	Compel, compelled	Disenthral, disen-
Admit, admitted	Bid, bidding	Complot, complotted	Dishevel, dishevelled
Allot, allotted	Blab, blabbed	Con, conned	Disinter, disinterred
Amit, amitted	Blot, blotted	Concur, concurred	Dispel, dispelled
Annul, annulled	Blur, blurred	Confer, conferred	Distil, distilled
Appal, appalled	Bob, bobbed	Control, controlled	Dog, dogged
Apparel, apparelled	Bowel, bowelled	Coquet, coquetted	Don, donned
Avel, avelled	Brag, bragged	Counsel, counselled	Dot, dotted
Aver, averred	Brim, brimmed	Cram, crammed	Drag, dragged
Bag, bagged	Bud, budded	Crib, cribbed	Dram, drammed
Bam, bammed	Cabal, caballed	Crop, cropped	Drib, dribbed
Ban, banned	Cancel, cancelled	Crum, crummed	Jrip, dripped
Bar, barred	Cap, capped	Cub, cubbed	Drivel, drivelled
Barrel, harrelled	Capot, capotted	Cudgel, cudgelled	Drop, dropped
Bed, bedded	Carol, carolled	Cup, cupped	Drub, drubbed
Bedim, bedimmed	Cavil, cavilled	Cut, cutting	Drug, drugged
Bedrop, bedropped	Channel, channelled	Dab, dabbed	Drum, drummed
Befal, befalling	Chap, chapped	Dag, dagged	Dub, dubbed
Befit, befitted	Char, charred	Dain, dauned	Duel, duelled
Beg, begged	Chat, chatted	Dap, dapped	Dun, dunned
Beget, begetting	Chip, chipped	Debar, debarred	Embar, embarrassed [led
Begin, beginning	Chisel, chiselled	Debel, debelled	Embowel, embowel-
Berob, berobbed	Chit, chitted	Defer, deferred	Emit, emitted
Beset, besetting	Chop, chopped	Demit, demitted	Empannel, empan-
Besmut, besmuted	Clap, clapped	Demur, demurred	nelled
Besot, besotted	Clip, clipped	Deter, deterred	Enamel, enamelled
Bespot, bespotted	Clod, clodded	Dig, digging	Englut, englutted
Bestir, bestirred	Clog, clogged	Dim, dimmed	Enrol, enrolled
Bestud, bestudded	Clot, clotted	Din, dinned	Entrap, entrapped
Bet, betted	Club, clubbed	Dip, dipped	Equal, equalled

Equip, equipped	Intromit, intromitted	Pip, pipped	Sip, sipped
Escot, escotted	Inwrap, inwrapped	Pistol, pistolled	Sit, sitting
Excel, excelled	Job, jobbed	Pit, pitted	Skim, skimmed
Expel, expelled	Jog, jogged	Plan, planned	Skin, skinned
Extile, extilled	Jug, jugged	Plat, platted	Skip, skipped
Extol, extolled	Jut, jutted	Plod, plodded	Siam, slammed
Fag, fagged	Ken, kenned	Plot, plotted	Slap, slapped
Fan, fanned	Kennel, kennelled	Plug, plugged	Slip, slipped
Fat, fattened	Kernel, kernelled	Pod, podded	Slit, slitted
Fib, fibbed	Kid, kidded	Pommel, pommelled	Slop, slopped
Fig, figged	Kidnap, kidnapped	Pop, popped	Slot, slotted
Fin, finned	Knab, knabbed	Postil, postilled	Slur, slurred
Fit, fitted	Knap, knapped	Pot, potted	Smut, smutted
Flag, flagged	Knit, knitting	Prefer, preferred [ted	Snap, snapped
Flain, flammed	Knot, knotted	Pretermitt, pretermitt-	Snip, snipped
Flap, flapped	Knub, knubbed	Prig, prigged	Snivel, snivelled
Flat, flattened	Lag, lagged [med	Prim, primmed	Snub, snubbed
Flit, flitted	Landdam, landdam-	Prog, progged	Snug, snugged
Flog, flogged	Lap, lapped	Prop, propped	Sob, sobbed
Flop, flopped	Let, letting	Propel, propelled	Sop, sopped
Fob, fobbed	Level, leveled	Pulvil, pulvilled	Sot, sotted
Forbid, forbidding	Label, labelled	Pun, punned	Span, spanned
Forefun, forerunning	Lig, ligged	Pup, pupped	Spar, sparred
Forestal, forestalled	Lip, lipped	Put, putting	Spet, spetted
Foretel, foretelling	Lob, lobbed	Quarrel, quarrelled	Spin, spinning
Forget, forgetting	Lop, lopped	Quip, quipped	Spit, spitting
Fret, fretted	Lug, lugged	Quit, quitting	Split, splitting
Fub, fubbed	Mad, madded	Quob, quobbed	Spot, spotted
Fulfil, fulfilled	Man, manned [ted	Ram, rammed	Sprig, sprigged
Fur, furred	Manumit, manumit-	Rap, rapped	Sprit, spritted
Gab, gabbed	Map, mapped	Ravel, ravelled	Spur, spurred
Gad, gadded	Mar, marred	Readmit, readmitted	Squab, squabbed
Gag, gagged	Marshal, marshalled	Rebel, rebelled	Squat, squatted
Gambol, gambolled	Marvel, marvelled	Recal, recalled	Stab, stabbed
Gem, gemmed	Mat, matted	Recommit, recom-	Star, starred
Get, getting	Miscal, miscalled	mitted	Stem, stemmed
Gip, gipped	Misinfer, misinferred	Recur, recurred	Step, stepped
Glad, gladdened	Mistel, mistelling	Refel, refelled	Stir, stirred
Glib, glibbed	Mob, mobbed	Refer, referred	Stop, stopped
Glut, glutted	Model, modelled	Refit, refitted	Strap, strapped
Gnar, gnarred	Mop, mopped	Regret, regretted	Strip, stripped
God, godded	Mud, mudded	Reinstal, reinstalled	Strut, strutted
Gospel, gosselled	Nab, nabbed	Remit, remitted	Stub, stubbed
Gravel, gravelled	Nap, napped	Repel, repelled	Stud, studied
Grin, grinned	Net, netted	Restem, restemmed	Stum, stummed
Grove, grovelled	Newmodel, newmo-	Revel, revealed [ted	Stun, stunned
Grub, grubbed	delled	Revictual, revictual-	Stut, stutted
Gum, gummed	Nib, nibbed	Rid, ridding	Submit, submitted
Gut, gutted	Nim, nimmied	Rig, rigged	Sum, summed
Hag, haggled	Nip, nipped	Rip, ripped	Sun, sunned
Hansel, handselled	Nod, nodded	Rival, rivalled	Sup, supped
Hap, happed	Nousel, nouselled	Rivel, rivelled	Swab, swabbed
Hatchel, hatchelled	Nut, nutted	Rivet, rivetted	Swag, swagged
Hem, hemmed	Occur, occurred	Rob, robbed	Swap, swapped
Hip, hipped	Omit, omitted	Bot, rotting	Swig, swigged
Hit, hitting	Onset, onsetting	Rowel, rowelled	Swim, swimming
Hitchel, hitchelled	Overbid, overbidding	Rub, rubbed	Swop, swopped
Hop, hopped	Overget, overgetting	Run, running	Tag, tagged
Hovel, hovelled	Overred, overredded	Rut, rutted	Tan, tanned
Housel, houselled	Overrun, overrunning	Sag, sagged	Tap, tapped
Hug, hugged	Overset, oversetting	Sap, sapped	Tar, tarred
Hum, hummed	Overskip, overskipped	Scab, scabbed	Ted, tedded
Hyp, hypped	Overflip, overslipped	Scan, scanned	Thin, thinned
Jam, jammed	Overtop, overtopped	Scar, scarred	Thrid, thriddled
Japan, japanned	Overtrip, overtripped	Scrub, scrubbed	Throb, throbbled
Jar, jarred	Outbid, outbidding	Scud, scudded	Thrum, thrummed
Jet, jetted	Outrun, outrunning	Scum, scummed	Tin, tinned
Jig, jugged	Outsit, outsitting	Set, setting	Tinsel, tinselled
Immit, immitted	Outstrip, outstripped	Sham, shammed	Tip, tipped
Impel, impelled	Outwit, outwitted	Shed, shedding	Top, topped
Inclip, inclipped	Pad, padded	Ship, shipped	Trammel, trammelled
Incur, incurred	Pan, panned	Shog, shogged	Transcur, transcurred
Infer, inferred	Parcel, parcelled	Shovel, shovelled	Transfer, transferred
Inship, inshipped	Pat, patted	Shred, shredding	Transmit, transmit-
Instal, installed	Patrol, patrolled	Shriveled, shrivelled	ted
Instil, instilled	Peg, pegged	Shrub, shrubbed	Trap, trapped
Instop, instopped	Pen, penning	Shrug, shrugged	Travel, travelled
Inter, interred	Permit, permitted	Shun, shunned	Trepan, trepanned
Intermit, intermitted	Pig, pigged	Shut, shutting	Trig, trigged
Intiral, intralled	Pin, pinned	Sin, sinned	Trim, trimmed

Trip, tripped	Unclog, unclogged	Unknit, unknitting	Wad, wadded
Trot, trotted	Undam, undammed	Unknot, unknotted	Wag, wagged
Tug, tugged	Underbid, underbid-	Unman, unmanned	War, warred
Tun, tunned	ding	Unpeg, unpegged	Wed, wedded
Tunnel, tunnelled	Underpin, underpin-	Unpin, unpinned	Wet, wetting
Tup, tupped	ned [propped	Unravel, unravelled	Whet, whetted
Twin, twinned	Underprop, under-	Unrig, unrigged	Whip, whipped
Twit, twitted	Underset, underset-	Unrip, unripped	Whiz, whizzed
Victual, victualled	ting	Unrivet, unriveted	Win, winning
Unbar, unbarred	Unfit, unfitted	Unrol, unrolled	Wit, witting
Unbed, unbedded	Ungod, ungodded	Unship, unshipped	Worship, worshipped
Unbias, unbiassed	Unkennel, unkennel-	Unstop, unstopped	Wot, wotted
Unbowel, unbowelled	led	Unwit, unwitted	Wrap, wrapped

The manner in which errors are noticed in a proof, is by marks or signs; and in order still further to illustrate the subject, an engraving is subjoined, in which each is exemplified.

A wrong letter in a word is noticed by drawing a short perpendicular line through it, and making another short line in the margin, behind which the right letter is placed. (See plate, No. 1.) In this manner whole words are corrected, by drawing a line across the wrong word, and making the right one in the margin, opposite the faulty line. (See No. 2.)

Where a word or words have been left out, or are to be added to the line, a caret must be made in the page where they are intended to come in, and the word or words written in the margin. (See No. 3.)

Where a space is wanting between two words, or letters that are intended to be separated, a parallel line must be drawn where the separation ought to be, and the sign, No. 4, placed opposite in the margin. Also, where words or letters should join, but are separated, the mark, No. 5, must be placed under the separation, and the junction of them signified by the same mark in the margin.

When letters or words are set double, or are required to be taken out, a line is drawn through the superfluous word or letter, and the mark, No. 6, placed opposite in the margin.

“THE art of Printing is but three hundred and sixty five years old; end it long remained an undetermined point between the town of Mentz in Germany, and a City of Haerlemin Holland, concerning the place where, and the person by whom, this divine art was first invented and practised; but, but, at this time, the majority of voices have determin^{ed} the dispute in favor of Mentz; however, we shall give both their pleas.

“It is said to be first, at Mentz attempted between the years 1440 and 1450, by John Fust, or Faust, John Meydenbuch, and John Genesteisch, surnamed Guttemberg. [It was a long controverted question by many learned antiquarians | whether Guttemberg or Faust was the inventor of that art, till happily the original instrument was found.]

Whereby it appears, that, on account of the great expences attending the cutting of the blocks of wood; which, after they were once printed from, became entirely useless for any other work. This instrument which is dated Nov. 6, 1455 is decisive in favor of Guttemberg; but the honor of single types made of metal, is ascribed to Faust | wherein he received great assistance from his servant and son-in-law Peter Schoeffer, who,” &c.

¹² The latter only connected the others with him for the sake of their purses, he not being able to proceed

² a /
² city /
⁴ # / ³ the

⁵ /
⁶ 8 / ⁷ 9 /
⁸ 1

⁹ r /

¹⁰ [/
¹¹ /
/

¹² no break

¹³ st /
¹⁴ Ital. /
¹⁵ S. Caps. /
¹⁶ Caps. /

¹⁷ ; ; ;

¹⁸ // / ¹⁹ /

A turned letter is noticed by making a dash under it, and the mark, No. 7, in the margin.

Marking turned letters tries a corrector's skill in knowing the true formation of them, without which it would be better to mark them in the same manner as they do wrong letters, unless they are very sure that they can distinguish b, d, n, o, p, q, s, u, x, z, when they are turned, from where the same letters stand with their nick the right way.

Where a space sticks up between two words, it is noticed by a cross in the margin. (See No. 8.)

Where two words are transposed, the word placed wrong should be encircled, and the mark, No. 9, placed in the margin: but where several words require to be transposed, their right order is signified by a figure placed over each word, and the mark, No. 9, in the margin.

Where a new paragraph is required, a line in the shape of a crotchet should be made, and the same mark, No. 10, placed in the margin; also where a paragraph should not have been made, a line should be drawn from the broken-off matter to the next paragraph, and write in the margin, *No break*. (See No. 11.)

Where several lines or words are added, they should be written at the bottom of the page, making a line from the place where the insertion begins, down to those lines or words. (See No. 12.) But where so much is added as cannot be contained at the foot of the page, write in the margin, *Out, see copy*.

If letters or words are to be altered from one character to another, a parallel line or lines should be made underneath the word or letter, viz. for capitals, three lines; small capitals, two lines; and Italic, one line: and write in the margin, opposite the line where the alteration occurs, *Caps. Small caps. or Ital.* (See No. 13.)

Where words have been struck out that have afterwards been approved of, dots should be marked under such words, and in the margin write *Stet*. (See No. 14.)

Where the punctuation requires to be altered, the semicolon, colon, and period, if marked in the margin, should be encircled. (See No. 15.)

No. 16 describes the manner in which the hyphen and ellipsis line are marked.

No. 17 also describes the manner in which the apostrophe, inverted commas, the star, and other references and superior letters and figures are marked.

Where letters or lines stand crooked, they are noticed by drawing lines before and after them. (See No. 18.)

When a smaller or larger letter, of a different fount, is improperly introduced into the page, it is noticed by the mark, No. 19.

Inaccuracy, in many cases, may proceed from the inattention and carelessness of the printer, which are always inexcusable; but this imperfection must often be ascribed to a want of a thorough acquaintance with every language, whether those generally in use, or those which are denominated dead languages; also a deficiency of knowledge of many of the arts and sciences, and other abstruse subjects, wherein technical phrases and terms often occur, which, unless very distinctly written, may be misunderstood by the most attentive and accurate corrector.

When it is considered that a part of each of these literary subjects may pass through the hands of the corrector, in his professional capacity, in one day, he who wishes to make accuracy his peculiar study, need not be ashamed nor afraid to solicit the aid of the indulgent author, to accomplish an end so desirable, and which would be so satisfactory to all parties.

In all cases, therefore, but particularly in those where the author has it not in his power to see the proof sheets, accuracy and distinctness of copy is peculiarly desirable.

If attention be paid to the right spelling of proper names of persons, places, technical terms, &c. the finishing of sentences marked by the period, that the author's ideas may not be misunderstood, and the hand-writing tolerably legible, much time and a very considerable expense would be saved, and the great object of accuracy gained, by gentlemen who communicate their sentiments to the public through the medium of the press—or there must be an unpardonable fault on the part of the *printer*.

As we have given in the annexed plate a page in which each of the marks already described is exemplified, it may not be amiss also to give that page corrected.

The Page (represented in the Plate) corrected.

“THE art of Printing is but three hundred and sixty-five years old ; and it long remained an undetermined point between the city of Mentz in Germany, and the city of Haerlem in Holland, concerning the place where, and the person by whom, this divine art was first invented and practised ; but, at this time the majority of voices have determined the dispute in favour of Mentz ; however, we shall give both their pleas.

“ It is said to be first attempted at Mentz, between the years 1440 and 1450, by John Fust, or Faust, John Meydenbuch, and John Genesteisch, surnamed Guttemberg.

“ It was a question long controverted by many learned antiquarians, whether Guttemberg or Faust was the inventor of that art, till happily the original instrument was found ; whereby it appears, that the latter only connected the others with him for the sake of their purses, he not being able to proceed without, on account of the great expenses attending the cutting of the blocks of wood ; which, after they were once printed from, became entirely useless for any other work. This *instrument*, which is dated Nov. 6, 1455, is decisive in favour of GUTTEMBERG ; but the honor of single types, made of metal, is ascribed to Faust, wherein he received great assistance from his servant and son-in-law, Peter Schoeffer, who,” &c.

Of Correcting in Metal.

By correcting, we understand the rectifying of such faults, omissions, and repetitions, as are made by the compositor, either through inadvertency or carelessness.

Correcting is the most disagreeable part of the compositor's business, attended not only with loss of time, but great fatigue, from leaning over the stone, and is therefore extremely prejudicial to health. To avoid this we recommend careful distribution, silence, and attention when at work. The noise and confusion which too often prevails in a printing-office, from light and frivolous conversation, not only retard business, but at the same time distract the attention of the compositor on the subject he has in hand, and cause him to run into such mistakes which can only be rectified by loss of time, and fatigue at the imposing stone. Some men, no doubt, are capable of supporting a conversation, and at the same time compose correctly, but their noise confuses those who are unable to preserve that accuracy but in quiet, and by close attention to their copy. The practice of talking while distributing is too much followed; and though those who may be composing need not join in the conversation, yet they are disturbed and diverted from the business they have in hand. The press-room is always, if possible, separated from the composing room, as the pressmen are generally discussing some *important point*, and are less liable to feel the inconvenience of much talking.

The first proof contains generally only the errors of the compositor; but it is almost impossible to discover the whole of them in the first reading; he is therefore

expected to correct all his blunders, whether in the first or second proof, without making a charge for it.

Immediately on receiving his proof, the compositor should begin to correct it, as it is of the utmost importance not to delay it; for it may occasion his standing still for want of letter; or be the means of keeping a press idle.

When he has gathered as many corrections between the thumb and fore-finger of his left hand as he can conveniently hold, and an assortment of spaces on a piece of paper, or, what is more convenient, in a small square box, with partitions in it, let him take the bodkin in his right hand, and instead of raising each letter he may have occasion to alter, he should place the point of the bodkin at one end of the line, and with the fore-finger of his left hand against the other, raise the line altogether, sufficiently high to afford him a clear view of the spacing; he may then change the faulty letter, and alter his spaces before he drops the line. By observing this method, he will not injure the type, which must be the case where the bodkin is forced either into their sides or heads; it likewise ensures a greater degree of regularity where there may be occasion to alter the spacing, and will not take up more time than the other method.

The most careful compositor cannot at all times avoid leaving a word or words out, or composing the same word twice; when this happens, he should consider the best mode of rectifying the accident, either by driving out or getting in above the error or below it; this ascertained, let the matter be taken into a galley, and overrun in the composing stick;—overrunning on the stone is an unsafe, unworkmanlike, and dilatory method, destroys the justification, and renders the spacing uneven.

In correcting, care should be taken not to hair-space a line, if it can possibly be prevented, but avoid it by overrunning, either backward or forward. He should also, in overrunning the matter, use the division as little as possible ; for though he may carefully follow the instructions laid down in this work, on the subject of spacing and dividing, yet the effect of his attention will be completely destroyed, if not followed up at the stone.

The first proof being corrected, a perfect sheet is pulled clean, to be sent to the author, or to the person by him authorized ; either of whom, if they understand the nature of printing, will not defer reading the sheet, but return it with as few alterations as possible, to be got ready for the press. But such authors, we are constrained to say, are very scarce.

CHAP. IX.

*Of Greek and Hebrew.*

“THE Greeks, consisting of distinct tribes, and governed by peculiar institutions, spoke the language differently in the different provinces. Their provincial peculiarities being not only used by the vulgar, but sanctioned by polished writers, have been dignified with the name of Dialects.

“The idioms, peculiar to the Ionians, form the Ionic dialect. This prevailed in Asia Minor, and the adjacent islands, and comprises the works of Hippocrates and Herodotus.

“The peculiarities of the Athenians constitute the Attic dialect, and are consecrated by the writings of Plato, Thucydides, Isocrates, Xenophon, Demosthenes, and Aristophanes.

“The language peculiar to the Lacedæmonians, to the inhabitants of Argos, Epirus, Rhodes, and Crete, was

called the Doric dialect. In this Pindar, Theocritus, and Archimedes, composed their works.

“ The Bæotians and their neighbours gave birth to the Æolic dialect. Sappho and Alcæus wrote in this ; but a small portion only of their productions has survived the wreck of ancient literature. From the Æolic dialect the Latin language is chiefly derived.

“ The language used alike by the different nations of Greece, in opposition to the several dialects, is called the common tongue.

“ The division of the Greek tongue into its several dialects, while it forms the principal cause of its superior copiousness, occasions one of the most serious difficulties in the acquisition of it by young men.

“ Oriental Grammarians have, with much propriety, divided the consonants into three classes, corresponding with the organs employed in sounding them. Thus π, β, ϕ, μ , being sounded by the lips, are hence called labials. On the other hand, $\tau, \delta, \theta, \varsigma, \lambda, \nu, \xi$, enunciated by a contact of the tongue with the extremities of the upper teeth, are for a similar reason styled dentals ; while κ, γ, χ , uttered by a contraction of the larynx, receive the name of gutturals.

“ This distribution of the consonants, though here confined to the Greek alphabet, necessarily extends to any other system of letters, and well deserves the attention of him who would acquire a philosophical acquaintance with the origin and derivation of words. To the interchange of the homogeneous consonants it is chiefly owing, that the primeval language of men, at first rude and barren, became copious (the same original term hence splitting itself into many), was afterwards diversified into dialects, and at length lost in distinct languages. Nor is it, I conceive, beyond the reach of philological

inquiries to prove, that the simple terms of any one language have their kindred terms in all the other languages, disguised indeed by the differences of character, termination, and meaning ; and that they may be traced back through the several changes of social life, till they meet, like so many spreading branches, in few common roots*.”

The Greek is one of the sacred languages, and more frequently used in printing than any of the rest ; which makes it necessary almost for every printing-office to be furnished with Greek letter, though not to the same amount of weight ; for a quantity of Greek letter that will moderately fill a case, and consisting of no other than useful sorts, is sufficient to serve for notes, mottos, words, &c. and such a collection of useful sorts may be lodged in a common pair of cases, by dividing some of the boxes of the upper case for the accents, and omitting useless letters, ligatures, and abbreviations. This was impracticable when ligatures and abbreviations were in use, for then seven hundred and fifty boxes were required for the different sorts in a fount of Greek. What induced the first founders of the art to perplex themselves with cutting and casting so many different abbreviations and contractions, may be partly guessed, by supposing that they were intended to imitate Greek writing, and to grace them with the same flourishes of the pen ; but what could prompt them to confound themselves with an infinite number of ligatures, we cannot well account for, and only suggest, that it was the contrivance of letter cutters to promote their own business. But this unprofitable system has almost entirely lost its credit ; and Greek, at present, is cast almost every-where

* Jones's Gr. Grammar.

without ligatures and abbreviations, unless where founders will not forbear thrusting them in ; or where they have express orders to cast them. Some few ligatures however not only grace Greek letter, but are also profitable to a compositor who knows how to use them properly.

But as we have intimated that the useful sorts of a fount of Greek letter may be lodged in a pair of cases that contain no more than two hundred and seven boxes, we will make good our assertion by a scheme for that purpose, which will incontestably prove that a great many of the sorts must be needless, where their number occupies seven hundred and fifty boxes. It must however be observed, that almost three hundred of these sorts are the same, and have no other difference than that of being kerned on their hind side ; for there has been Greek with capitals kerned on both sides. But before any thing more be said concerning ligatures, we will consider the single letters of the Greek, and accordingly exhibit the alphabet.

The Greek Alphabet.

A α	Ἀλφα	Alpha	a
B β β̣	Βῆτα	Beta	b
Γ γ γ̣	Γάμμα	Gamma	g
Δ δ	Δέλτα	Delta	d
E ε	Ἐψιλὸν	Epsilon	e short
Z ζ ζ̣	Ζῆτα	Zeta	z
H η	Ἡτα	Eta	e long
Θ θ θ̣	Θῆτα	Theta	th
I ι	Ἰῶτα	Iota	i
K κ	Κάππα	Kappa	k c
Λ λ	Λάμβδα	Lambda	l
M μ	Μῦ	Mu	m
N ν	Νῦ	Nu	n
Ξ ξ	Ξι	Xi	x
O ο	Ὀμικρὸν	Omicron	o short
Π π π̣	Πι	Pi	p
P ρ ρ̣	Ῥῶ	Rho	r
Σ σ σ̣	Σιγμα	Sigma	s
T τ τ̣	Τᾶυ	Tau	t
Υ υ	Ἑψιλὸν	Upsilon	u
Φ φ	Φι	Phi	ph
X χ	Χι	Chi	ch
Ψ ψ	Ψι	Psi	ps
Ω ω	Ὠμέγα	Omega	o long

The Greek alphabet contains seventeen consonants and seven vowels.

Two vowels make a diphthong; of which there are six that are called *proper* diphthongs, formed from the short vowels, (including α short) with ι or υ.

αι αυ ει ευ οι ου.

Instead of α improper, η , and ω , the Greeks write α , η , and φ ; the point under these vowels denoting the iota, which therefore is called *iota subscriptum*. But because capitals have no subscripts, the iota is put in lower-case to the capital letter; as, ΤΩι ΠΟΙΗΤΗι.

The Greek vowels admit of two aspirations, viz. *spiritus asper* ['] and *spiritus lenis* ['].

Spiritus asper has the sound of an h; and *spiritus lenis* denotes the absence of that sound.

All the words that begin with a vowel have one of these aspirations over them; but the vowel upsilon admits of no other than the *spiritus asper*, at the beginning of a word.

In diphthongs, the *spiritus* is put over the second vowel; as αὐτὸς, not αὐτὸς.

The letter ξ , at the beginning of a word, has an *asper* over it, as ξέω; and where two ξ 's meet in a word, the first has a *lenis*, and the other an *asper*.

The Greek has three accents, viz. acute ['], which can fall only upon one of the three last syllables of a word.

Grave ['], which must only be placed on the last syllable.

Circumflex [~], which only occurs on the last syllable and the last but one.

The apostrophe ['] is used for cutting off the vowels α , ϵ , ι , $\omicron$, and the diphthongs $\alpha\iota$ and $\omicron\iota$, when they stand at the end of a word, and the next word begins with a vowel; as, παρ' αὐτῷ, for παρὰ αὐτῷ; πάν' ἔλεγον, for πάντα ἔλεγον.

Sometimes the apostrophe contracts two words into one; as, κ' γὰρ, for καὶ ἐγὰρ; ἐγῶμαι, for ἐγὼ οἶμαι; κ' κεῖν, for καὶ ἐκεῖν.

Sometimes an apostrophe supplies the first vowel beginning a word ; as, ᾠ'γαθὲ, for ᾠ ἀγαθὲ ; ποῦ'σι, for ποῦ ἐσι. This is chiefly used in poetry.

But the prepositions *περὶ* and *πρὸ* suffer no apostrophe, though the next word begin with a vowel ; for we write *περὶ ὑμῶν*, *πρὸ ἐμοῦ* ; *περὶ αὐτον*, *πρὸ ἐτῶν*, &c.

The diæresis [˘] separates two vowels, that they may not be taken for a diphthong : thus, *ἄυτη* with a diæresis makes three syllables ; but without a diæresis *αυ* is a diphthong, and makes *αὔτη* have but two syllables.

Diastole [,] is put betwixt two particles that would bear a different sense without it ; thus, *ὅ,τε ὅ,τι* signify *whatever* ; whereas *ὅτε* stands for *as*, and *ὅτι* for *that*. *Τό,τε* with a diastole implies *and this*, but when without, it answers to the adverb *then*.

The sign of interrogation, in the Greek, is made by a semicolon [;].

The colon, in the Greek, is made by an inverted full-point [·].

Such compositors and readers as are not Greek scholars, and even those who are, but have not paid attention to accents, will do well to bear in mind what has been said above concerning the proper situations of the spirits and accents ; as many of the faults which so frequently offend the scholar's eye, might thereby be avoided. The following rules may be easily borne in mind :—No accent can be placed over any other than one of the three last syllables of a word. No vowel can have a spirit, except at the beginning of a word. The grave accent never occurs but on the last syllable ; and this being the case, the asper grave [ˆ] and lenis grave [˘] can be wanted only for a few monosyllables, and less than half the quantity usually cast would be enough in a fount. Almost all words have an accent, and they very seldom have more

than one ; and when this happens, it is an acute thrown back upon the last syllable from one of those words called enclitics, which in that case has none, unless it be followed by another enclitic. In no other case than this can a last syllable have an acute accent, except before a full point, colon, or note of interrogation, when the grave accent on the last syllable is changed to an acute ; a circumstance which has often led printers who were ignorant of the reasons for accenting the same word differently in different situations, to think that there was an error in their copy, and thus to make one in their proof. Most errors however proceed from those who do not think at all about the matter,—“ *qui correctiones non curant, et cantando literas jungunt, quod non potest fieri, nisi mendosè.*”

Greek Lower Case.

kern		stern	kern	basen	basen	Heil	Thin Spaces.
α	ι	υ	ω	ω	ω	ε	
β	ζ	η	λ	λ	ρ	ε	
κ	ξ	υ	υ	υ	μ	ν	
π	ϕ	θ	θ	θ	θ	ε	
ρ	ψ	ς	ς	ς	ς	ς	
σ	τ	τ	τ	τ	τ	τ	
ω	ω	ω	ω	ω	ω	ω	
α	α	α	α	α	α	α	
β	β	β	β	β	β	β	
γ	γ	γ	γ	γ	γ	γ	
δ	δ	δ	δ	δ	δ	δ	
ε	ε	ε	ε	ε	ε	ε	
ζ	ζ	ζ	ζ	ζ	ζ	ζ	
η	η	η	η	η	η	η	
θ	θ	θ	θ	θ	θ	θ	
ι	ι	ι	ι	ι	ι	ι	
κ	κ	κ	κ	κ	κ	κ	
λ	λ	λ	λ	λ	λ	λ	
μ	μ	μ	μ	μ	μ	μ	
ν	ν	ν	ν	ν	ν	ν	
ξ	ξ	ξ	ξ	ξ	ξ	ξ	
ο	ο	ο	ο	ο	ο	ο	
π	π	π	π	π	π	π	
ρ	ρ	ρ	ρ	ρ	ρ	ρ	
σ	σ	σ	σ	σ	σ	σ	
τ	τ	τ	τ	τ	τ	τ	
υ	υ	υ	υ	υ	υ	υ	
φ	φ	φ	φ	φ	φ	φ	
χ	χ	χ	χ	χ	χ	χ	
ψ	ψ	ψ	ψ	ψ	ψ	ψ	
ω	ω	ω	ω	ω	ω	ω	

Note. The Greek abbreviations and connexions here subjoined, were copied, by permission, from the plate annexed to Dr. Valpy's Greek Grammar, which is allowed to be the most accurate list hitherto published.

Of Hebrew.

“ Whatever disputes may have arisen among the learned, respecting the antiquity of the Hebrew alphabet, or the manner of writing it, little doubt appears to have been entertained of the antiquity of the language itself. The writings of Moses, and the book of Job, are undoubtedly the most ancient compositions acknowledged in Europe. Both these works exhibit a language arrived at a great degree of perfection, and which must have been in use, as a written, as well as an oral tongue, long before these writings were published, or it would have been useless to have written where none could read*.

“ Besides a great number of words in the Greek, Arabic, and Celtic, which appear to have been derived from the Hebrew, the very structure of the language points it out as an original one.

“ The radical words very uniformly consist of two or *three* letters, and the derivatives branch out from them in a manner best calculated to produce precision, and conciseness of expression.

“ The question respecting the original Hebrew characters, has undergone abundance of discussion, from the times of the first fathers of the Christian church, down to this day. Origen and Jerom, on the authority of the old Rabbis; and among the moderns, Scaliger, Monttaucon, Chishull, and Dr. Sharpe in his treatise on this subject; contend, that the Samaritan was the original Hebrew character, and that the present alphabet was invented after the captivity.

* Astle on the Origin and Progress of Writing, p. 12.

“ Origen speaks to this effect: In the more accurate copies of the Old Testament, he says, the sacred name of Jehovah is actually written, but in the *ancient* Hebrew letters, and not in those in use at present, which Esdras is said to have introduced after the captivity.

“ St. Jerom, in his preface to the books of Kings, puts this matter in a still stronger light: he says, the Samaritans often copy the five books of Moses, in the same number of letters as the Jews do; but their letters differ in form, and the use of points: for it is certain that Esdras, the scribe and a teacher of the law, after the taking of Jerusalem, and the restoration of the temple under Zorobabel, invented those other letters which we now use; whereas, before that time, the letters of the Samaritans and Hebrews were the same.

“ From these passages of Origen and Jerom, we may very certainly conclude that this was the opinion of the ancient Rabbis and Jewish doctors: but it is very singular and worthy of notice, that Origen says, that even in his time, the sacred name, in the more accurate copies of the bible used by the Jews themselves, was written in the ancient or Samaritan, not in the Hebrew or modern alphabet; for both Esdras and the other rulers of the synagogue, who patronized the use of the new characters, believed themselves conscientiously bound to preserve the name of Jehovah in the same letters in which they first received it,

“ In support of the opposite opinion, the modern Rabbis, the two Buxtorfs, Wasmuth, Schickard, Lightfoot, and P. Allix, (Spanh. p. 69), &c. contend that the alphabet now in use among the Jews, is the same that the Law and Old Testament were originally written in from the time of Moses.

“ Having stated the nature of the dispute, and some of the principal authors on both sides of the question, we think it right to remind our readers, that it is no part of this work to enter minutely into controversies of this kind *.”

The Hebrew Alphabet.

		No. 1.	No. 2.
Aleph	א	Sounded as <i>a</i> in <i>war</i> . [<i>vowel</i>]	A gentle aspirate
Beth	ב		<i>Bl</i>
Gimel	ג	<i>g</i> hard	<i>Gh</i>
Daleth	ד		<i>Dh</i>
He	ה	<i>a</i> in <i>hate</i> . [<i>vowel</i>]	A rough aspirate
Vau	ו	<i>u</i> <i>vowel</i> , or before a <i>vowel</i> , <i>w</i>	<i>Ds</i>
Zain	ז		<i>Hh</i>
Cheth	ח		
Teth	ט	<i>Th</i>	
Jod	י	Like <i>ee</i> in English. [<i>vowel</i>]	<i>j</i> consonant, or the softer <i>y</i>
Caph	כ	<i>k</i> , or <i>c</i> hard	
Lamed	ל		
Mem	מ		
Nun	נ		
Samech	ס		Soft <i>s</i>
Ain	ע	<i>o</i> long. [<i>vowel</i>]	<i>hg</i> , or <i>hgh</i> , the roughest aspirate
Phe	פ		
Tzaddi	צ	<i>j</i> soft	
Koph	ק	<i>q</i> , or <i>qu</i>	
Resch	ר		
Shin	ש or Sin		<i>s</i> hard
Thau	ת		

In the column, No. 1, of the foregoing table, the force of the Hebrew letters, when read without points, is expressed; and the next column, No. 2, gives you their force when the language is complicated with the Masoretic points or vowels, which are certainly of later date than the present Hebrew letters.

Letters that have a Likeness to others.

Beth ב		Caph כ		Gimel ג		Nun נ	
Daleth ד	Caph ך		Resch ר	He ה	Cheth ח	Thau ת	
Vau ו	Zain ז	Jod ,	Nun ן	Teth ט		Mem מ	
Mem ם		Samech ס		Ain ע		Tzaddi צ	

The following five letters are cast broad, and are used at the end of words, viz.

Aleph א	He ה	Lamed ל	Mem ם	Thau ת
------------	---------	------------	----------	-----------

but are not counted among the final letters, being contrived for justifying, because Hebrew is not divided.

Although the vowel points, in the opinion of the best scholars, are not essential to the language, yet as they are still used in some bibles, and in all works published by Jews, it may be necessary for a compositor to attend to them

The Masoretic vowels or points are such as are here subjoined, under the consonant ב, or beth.

1. *The long Vowels.*

Their names are—

Kametz	ָ	aa	בָּ	baa
Tzeri	ִ	ee	בִּי	bee
Long Chirek	ִי	ii	בִּי	bii
Cholem	וּ	oo	בּוּ	boo
Shurek	וּ	uu	בּוּ	buu

2. *The Short.*

Patach	-	a	בַּ	ba
Sægol	ֿ	e	בְּ	be
Little Chirek	ֿ	i	בִּ	bi
Kametz-chatuph	ֿ	o	בֹּ	bo
Kibbutz	ֿ	u	בֻּ	bu

3. *Shevas, which imply a vowel to be wanting.*

Simple Sheva	ְ	
Patach furtive	ֶ	
Chateph Patach	ֶּ	a
Chateph Sægol	ֶֿ	e
Chateph Kametz	ֶֿ	o

The three last are called compound shevas; and in fact we see that they are only the short vowels, to which the simple sheva (ְ) is joined.

The best idea we can give of these shevas, is in the English words *ev'ry* and *indignant*. Between the *ev-* and *-ry* there is a kind of semi-sound of *e* ; and between the *indig-* and the *-nant* there is a similar sound, as if the word was *indigenant*. These semi-sounds the Hebrews would call shevas.

Dagesch (·) and mappik (◌) are two points placed in the body of certain letters.

The dagesch is either *forte* or *lenis*.

Dagesch forte may have a place in all the letters, except א ה ח ע ר, and it makes the letter sound double.

Dagesch lenis has its place in ב ג ד כ פ ת, and raises the sound of the letter.

Mappik has its place in the letters *he* and *jod*.

Raphe is a short dash that heretofore was put over פ ת כ ב ג ד when they had no dagesch, to shew that they should be pronounced soft, and with the aspiration of an *h*.

Maccaph — is used to connect words together, which is common in Hebrew.

Soph-Pasak is the name of the two great points [:], which stand at the end of each verse in the Hebrew bible.

Besides the vowels, the Hebrews have various accents, of which some have their place over, and some under the letter. They are not used in all Hebrew writings, but only in some books of the bible, where they stand for notes to sing by, and are therefore called *accentus tonici*.— Others, again, are named *accentus distinctivi*, because they distinguish the sense, as pointing does in the English ; and others have the appellation of *ministri*, or *servi non distinctivi*, which shew the construction and connexion of words. The figures, names, and signification of the accents that stand over the letters, are as follow, viz.

Segol, or Segolta	" Strong colon
Sakeph katon	' Comma
Sakeph gadol	" Ditto
Refia, or Rbhia	• Ditto
Sarka	~ Semicomma primum
Pasta	' Ditto
Geresch	' Semicomma secundum
Geraschajim	" Ditto
Telischa Gedola	9 Semicomma tertium
Paser minor	v Semicomma quartum
Paser major	w Ditto
Karne para	90 Ditto
Schalscheleth	‡ Semicolon
Pesik, or legarme	' Ditto
Kadhma	\ Semicomma
Telischa ketanna	9 Ditto

The following accents have their place under the letters; viz.

Silluk	' Punctum
Atnach	^ Colon
Tiphcha	\ Semicomma primum
Tefir	" Ditto
Jethif	" Semicolon
Munach	' Semicomma
Merea simplex	\ Ditto
Merca duplex	" Ditto
Mahpach	" Ditto
Darga	' Ditto
Meajela	' Ditto
Jerach ben jomo	" Ditto

The Hebrew has no capitals ; and therefore letters of the same shape, but of a large body, are used at the beginning of chapters, and other parts of Hebrew works.

But we must not pronounce it a fault, if we happen to meet in some bibles with words that begin with a letter of a much larger body than the text ; nor need we be astonished to see words with letters in them of a much less body than the text ; or wonder to see final letters used in the middle of words ; for such notes shew that they contain some particular and mystical meaning. Thus in 2 Chron. i. 1, the word Adam begins with a letter of a larger size than the rest, thereby to intimate, that Adam is the father of all mankind. In Genes. i. 1, the great beth in the word Bereschith stands for a monitor of the great and incomprehensible work of creation. Contrary to the first, in Prov. xxviii. 17, the daleth in the word Adam is considerably less than the letter of the text, to signify, that whoever oppresses another openly or clandestinely, though of a mean condition, or who sheds innocent blood, is not worthy to be called man.

Sometimes the open or common mem stands in the room of a final one ; as in Nehem. ii. 13, where the word Hem has an open mem at the end, in allusion to the torn and open walls of Jerusalem, of which there is mention made ; and in Es. vii. 14, where the prophet speaks of the conception of the Virgin Mary, the mem in the haalma, or virgin, is a close or final letter, to intimate the virginity of the mother of our Saviour. Such are the peculiarities of some Jewish Rabbis, in bibles of their publication ; of which we have instanced the above, to caution compositors not to take them for faults, if such mystical writings should come under their hands.

For the rest, Hebrew reads from the right to the left, like all other oriental languages, except the Ethiopic and

Armenian. In composing Hebrew, therefore, the Jews begin at the end of the composing stick, and justify the vowels and accents over and under the letters after the line of matter is adjusted. But points serving often to make the sense of a word ambiguous, they are seldom used in any other than theological and grammatical writings.

The Hebrew, like the Greek, has more sorts than are required in a complete fount; which renders it difficult to make room for them in cases of common dimensions; considering that the powers of the Hebrew alphabet are distinguished by points that letters have either in their body or over it. Accordingly we observe in some founts the dagesch forte to have a place in all the letters of the alphabet, though it is not admitted into five of them. The second series is the whole alphabet, with a cholem over each letter; and a third alphabet has the dagesch in the body, and the cholem on the top. Exclusive of which treble alphabet, some founders cast a fourth, that is kerned on both sides, and makes the alphabet with a cholem needless, because by the help of the kerned alphabet not only the cholem but even the vowels may be made to stand in their proper places, provided they are cast after the manner of Greek accents, thin, and inclining towards the middle of the foot of the letters.

We have been favoured with the following plan of a pair of Hebrew cases, in which the points are included, by Mr. Justin, who prints considerably for the Jews, and who has found it, from long experience, to answer the purpose. As the generality of offices print without points, we have also given a plan consisting only of the common alphabet and final letters.

A common Hebrew Case.

[	ם	m Quadrats.	Quadrats.	
		n Quadrats.		
ם	י	א	..	
י	י	ב	ם	.
[	ע	ם	ר	
ז				
ז	י	י	ש	
ר	ר	ב	Spaces-	
י	ר	ז	ר	
ם	ב	ב	ב	
ר	א	י	ע	

CHAP. X.

*Pantographia.*

IT is with much pleasure that we have it in our power to gratify the philologist and the antiquary with some considerable extracts from Dr. Fry's "*Pantographia*," a work given to the public a few years since, which was the product of about sixteen years application and research, and has been honourably spoken of in many of the Reviews. That gentleman has obligingly accommodated us with several of the engravings of his work for this purpose, and assisted us in the arrangement, and favoured us with some additional remarks.

Arabic. 1.

ل ا ب ج د ه و ذ ح ط ز د ا
l c i t ch z v h d g b a
ح ث ت ز س ر ك ط ه ه س ن م
ch th tz sc r k ts ph hh s n m
لا غ ط ذ د
la gc thz dz dh

The most ancient Arabic letters are the Kufic, so named from the city of Kufa on the Euphrates; (Ency. Franc. des Alph. anc. et mod. Pl. 3.) but they do not appear to be in use at this time. This alphabet was communicated to Dr. Morton, of the British Museum, by Dr. Hunt, Hebrew and Arabic Professor at Oxford, from the Bodleian Library.

Dr. Morton's Tables.

Arabic. 2.

ث ث ث ت ت ت ب ب ب ل ا
T T B A
ذ د د ح ح ح ح ح ج ج ج ج ج
D D Ch Hh G
ص ص ص ش ش س ز ز ر ر
S Sj S Z R
غ غ غ ع ع ع ظ ظ ط ض ض ض ض
G Ai D T D
ل ل ل ك ك ك ك ك ق ق ق ق ق
L C K F
ي ي ي ه ه ه و و ن ن ن م م م
I H W N M

These modern characters are the invention of the vizier Molach, who flourished about 933 of the Christian era, with which he wrote the Koran three times, and in a manner so fair and correct, as to be considered a perfect model of writing it.

Fourn. v. ii. p. 278.

This is the common character of the Turks and Persians, but these people have five more letters than the Arabs, (Fourn. v. 2, p. 278). This is the alphabet in present use, in which are expressed the initials, medials, and finals, with their powers subjoined.

Arabic. 3.

ا	ز	ح	هـ	د	ج	ب	ا
ch	z	v	h	d	g	b	a
حـ	و	ن	م	ل	ع	ي	ت
hh	s	n	m	l	c	i	t
ث	ذ	ذـ	سـ	ر	ك	ط	ف
thz	dz	dh	sc	r	k	ts	ph

Arabic or Mauritanian. This alphabet is used in Morocco and Fez, and the northern parts of Africa.

Fourn. v. 2, p. 279.

Ancient British.

Eyen taad rhuvn wytyn y neofoedodd; Santeiddier yr hemuv tau: De vedy dyrnas dau: Guueler dy wollys arryddayar megis agyn y nefi. Eyn baræ beunydda.vul dyro inniheddivu: Ammaddeu ynny evn deledion, megis agi maddevu in deledvuir ninaw: Agna thowys ni in brofedigaeth: Namyn gvaredni.

The Lord's Prayer.

Orat. Dom. p. 50.

Chaldean. 1.

Chaldea, or Babylonia, a kingdom of Asia, and the most ancient in the world, was founded by Nimrod, the son of Cush, and grandson of Ham, who, according to some historians, built Nineveh, the capital of Assyria.

Philologists are much divided in their sentiments or opinions respecting the antiquity of this language.

Pliny informs us, that Gellius attributed letters to the Egyptian Mercury, and others to the Syrians.

The learned Roman, just mentioned, supposed that the Assyrian letters were prior to any record of history, and by these he undoubtedly meant the Chaldean; it should seem most probable, that the language used by the antediluvian patriarchs bore the greatest analogy to this, especially when it is universally allowed that they inhabited that part of the globe, whence many have thought the Chaldean to have been prior to the Samaritan and Hebrew.

							
hh	z	v	h	d	g	b	a
							
o	s	n	m	l	k	i	th
							
t	sch	r	q	ts	p		

This alphabet is called celestial; said to have been composed by the ancient astrologers, from the figures of certain stars, and represented in two hemispheres.

Gaffarel, p. 1.

Chaldean. 2.

𐤠	𐤡	𐤢	𐤣	𐤤	𐤥	𐤦	𐤧
hh	z	v	h	d	g	b	a
𐤨	𐤩	𐤪	𐤫	𐤬	𐤭	𐤮	𐤯
o	s	n	m	l	k	i	th
𐤱	𐤲	𐤳	𐤴	𐤵	𐤶	𐤷	
t	sch	r	q	ts	p		

Theseus Ambrosius asserts, that this character was brought from heaven by the Angel Raphael, by whom it was communicated to Adam, who used it in composing psalms after his expulsion from the terrestrial paradise.

Some authors pretend that Moses and the prophets used this letter, and that they were forbidden to divulge it to mortal men.

Duret, p. 119.

Chaldean. 3.

𐤠	𐤡	𐤢	𐤣	𐤤	𐤥	𐤦	𐤧
hh	z	v	h	d	g	b	a
𐤨	𐤩	𐤪	𐤫	𐤬	𐤭	𐤮	𐤯
o	s	n	m	l	k	i	th
𐤱	𐤲	𐤳	𐤴	𐤵	𐤶	𐤷	
t	sch	r	q	ts	p		

This character is also said to have been used by Adam.

Spanh. Dissert. p. 80.

Dr. Morton's Tables.

Chinese.

𠂔	馬	隸	赤	色	网
tchì	mà	tái	tchě	sě	vàng
𠂔	骨	隹	走	艸	羊
min	kǒ	tchōui	tçèou	tçào	yang
鼎	高	雨	足	虎	羽
ting	cāo	yù	tçǒ	hoù	yòu
鼓	𠂔	青	身	虫	老
kòu	piēou	tsing	chīn	tchông	laò

This language has no alphabet, being composed of a great number of very limited sounds, and it would be impossible to understand it in any other character. It has but 328 sounds, and all monosyllables, applicable to 80,000 characters, of which this language is composed.

There are also 214 keys, or radical characters, the whole of which are given, correctly and beautifully engraved, in the Encyc. Franc. pl. 25, whence the above specimen is copied.

Coptic.

Δ	Β	Σ	Ϡ	Ϻ	Ϸ	Ϣ	Ϫ
a	b	g	d	e	z	s	h
€	8	Ϡ	Χ	ϯ	SV	3	U
th	i	k	l	m	n	x	o
ϫ	ϣ	Ϯ	ϭ	Χ	Ψ	ϭ	ϯs
p	r	s	t	y	ph	ch	ps

This character, which Fournier calls an “ancient” Coptic, was used by the inhabitants of a city of Egypt, called Coptos, whence the Cophites derived their origin. They were Christians, and flourished in great numbers in the time of Dioclesian, who put many to death, and sent the rest into exile.

V. 2, p. 274. Duret, p. 755.

Domesday. 1.

Rex ten' in dūic W letone. T. R. E. 7 m
se desb p. xi hid. Tra. ē. xi. car. In dūic
e una car. 7 xv. uilli 7 xmi. horb cu. x. car.
lbi. iii. serui. 7 ii. molini pe. vvv. solid. 7
viii. ac q̃ti silva q̃te ē in chent. Richard de
Tonebrige ten' de hoc in una uirgataen silva.
unbe abhtnlic tusticum q̃ni ibi mrnebat. No

This character was cut by the late ingenious Thomas Cotterel, the letter founder, for the folio edition of Domesday book.

The specimen given is taken from Luckombe's history of the origin and progress of printing; 8vo. Lond. 1770, p. 174.

Domesday. 2.

Robt ten' de ead' fem'. CRIZ. Bcln tenuit T.R.E. 7
geldb p dim' hida. Tra. ē. dim' car. q̃ ibi. ē cū. iiii
bord. 7 iii. ac p̃ri. 7 vii. q̃z pasturæ ling. 7 iii. q̃z
in laī. Valet. x. sol.

Ipsa ten' WILCESWDE. Aluuard tenuit T.R.E. 7 geldb
p. iii. hid 7 dim'. 7 ii. partibz uni v'. Tra. ē. iii. aīc

This is a specimen from the same types that the folio edition of Domesday was printed with, and is composed from that part relating to the county of Dorset, p. 84—6. This letter was cut by the late Joseph Jackson, in a manner more successful than his fellow-labourer. He also engraved a variety of types for the Rolls of Parliament, a work which will ever reflect honour on the good taste of the present reign.

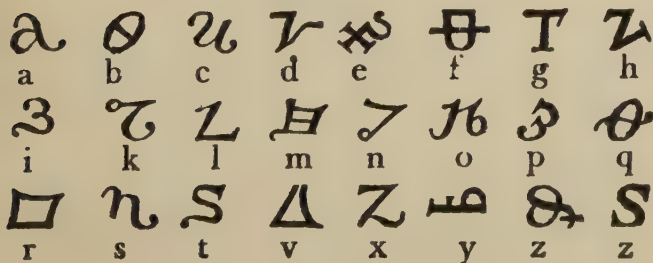
Egyptian. 1.

The Egyptians, before their knowledge of letters and characters, expressed their thoughts by the representation of the forms of various animals, trees, plants, herbs, and even of several of their own members, which they called Hieroglyphic. They had also letters which were used by the Ethiopians, approaching to the Hebrew, but we have no certainty as to their language or writing.

Duret, p. 380.

Fournier calls this *lettres sacrées*, and says they are attributed to the Mercury Thot.

Vol. 2, p. 273.

Egyptian. 2.

This alphabet has generally been received as hieroglyphic, according to Ambrosius, but there does not appear sufficient reason for it.

Duret, p. 382. Fourn. v. 2, p. 273.

Egyptian. 3.

							
a	a	b	d	h	v	z	hh
							
i	k	l	m	n	s	aa	q
							
		q	r	sh	t		

This alphabet was discovered by the late Abbé Barthelemi, from whose sagacity and inquiries there can be no doubt of its being Egyptian; and being found under a monument in Egypt, had never been deciphered before.

Encyc. Franc. pl. 5.

Egyptian. 4.

						
h	g	f	d	c	b	a
						
q	p	o	n	m	l	k
						
th	z	y	x	u	t	s
						
						r

This character is different from every other of this name, being written from right to left.

Fourn. v. 2, p. 273.

Egyptian. 5.

Remarkable hieroglyphics engraved on the chair of a colossal statue near Luxxor and Carnac.

Norden's *Antiquities of Egypt and Nubia*, v. 2, p. 111.

English.

There is not, perhaps, any language in the world, which has experienced so many revolutions as this; and, like the political constitution of the country, it seems to have gained both strength and energy by every change.

We may conclude, from Cæsar's account of this island and its inhabitants, that about the beginning of the Christian era, the language of the ancient Britons was the same or very similar to that of Gaul or France at that time, and which is now believed to have been the parent of the Celtic, Erse, Gaelic or Welch; for the intercourse between this island and Gaul, in Cæsar's time, as well as their relative situations, render it more than probable that Britain was peopled from that part of the continent, as both Cæsar and Tacitus affirm and prove, by many strong and conclusive arguments.

There are now but few remains of the ancient British tongue, except in Wales, Cornwall, the isles and highlands of Scotland,

part of Ireland, and some provinces of France; which will not appear strange, when we consider that Julius Cæsar, some time before the birth of our Saviour, made a descent on Britain; and in the time of Claudius, about A. D. 45, Aulus Plautius was sent over with some Roman forces, who overcame the two kings of the Britons, Togodumnus and Caractacus, when the southern parts of the island were reduced to the form of a Roman province, after which, Agricola subdued the island, as far as Scotland; whereupon a great number of the Britons retired into Wales, Scotland, and the isles, carrying their language with them. The greatest part of Britain being thus become a Roman province, the legions who resided in the island above two hundred years, undoubtedly disseminated the Latin tongue; and the people being afterwards governed by laws written in Latin, must necessarily create a mixture of languages.

Thus the British tongue continued, for some time, mixed with the provincial Latin, till the Roman legions being called home the Scots and Picts took the opportunity to attack and harass England: upon which Vortigern, about 440, called the Saxons to his assistance, for which he rewarded them with the isle of Thanet, and the whole county of Kent; but they growing powerful and discontented, dispossessed the inhabitants of all the country eastward of the Severn; by which means the Saxon language was introduced.

In the beginning of the ninth century, the Danes invaded England, and became sole masters of it in about two hundred years, whereby the British language obtained a tincture of the Danish, but this did not make so great an alteration in the Anglo-Saxon, as the revolution in 1066, by William the First, who, as a monument of the Norman conquest, and in imitation of other conquerors, endeavoured to make the language of his own country as generally received as his commands; thus the ancient English became an entire medley of Celtic, Latin, Saxon, Danish, and Norman French.

Since the restoration of learning, the sciences have been cultivated with such success in this island, that in astronomy, anatomy, natural history, natural philosophy, chemistry, medicine, and the fine arts, innumerable terms have been borrowed from that inexhaustible source, the Greek. Italy, Spain, Holland, and Germany, have also contributed something, so that the present English may be considered as a selection from all the languages of Europe.

English. 1.

On ðære tide þe Gotan of Siððiu mægþe
 riþ Romana rice Ʒepin upahofon. Ʒ miþ he-
 ora cýningum. RædƷota and Eallerica pæ-
 non hotne. Romane burig abpæcon. Ʒ eall
 Italia rice ꝥ iŷ betpux þam muntum Ʒ SiCi-
 lia ðam ealonde in anpald Ʒerehton. Ʒ þa
 æƷter þam forerpprecenan cýningum ðe-
 oðric fenƷ to þam ilcan rice. Ʒe ðeodric
 pæf Amulinga. he pæf Gpirten. þeah he on

Doctor Johnson, in his history of the English language, being the preface to his quarto dictionary, 1785, gives the above as the earliest specimen of it, taken from king Alfred's paraphrase or imitation of Boethius, which is here given in the Saxon character as used at that time.

See Saxon.

English. 2.

Ðiŷ Ʒære for þe king ðtephne ofeŷ Ʒæ to
 Normandi. Ʒ þeŷ pef under-ƷanƷen. forði
 ꝥ hi penden ꝥ he ŷculde ben alŷuic alŷe þe
 eom pef. Ʒ for he hadde Ʒet hiŷ tpeŷon.
 ac he to-deld it Ʒ ŷcateped ŷotlice. Micel
 hadde þenri king Ʒadeped gold Ʒ ŷyluen.
 and na Ʒod ne diðe me for hiŷ ŷaule þar
 of. Ða þe king ðtephne to Engla land com

About 1150, in the reign of king Stephen, according to Dr. Johnson, the Saxon language began to take the form in which the present English was plainly discovered. The specimen here given is extracted from Gibson's Saxon Chronicle, of the date of 1137, p. 238.

English. 3.

Aa Bb Cc Dd Ee Ffff
Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr S
Ss Tt Uu Vv Ww Xx Yy Zz.

Set Chancery. This alphabet began to take place in this country about the decline of the fourteenth century, and is, with the following, or Running Chancery, used in the enrolments of letters patent, charters, &c. and in the exemplification of recoveries.

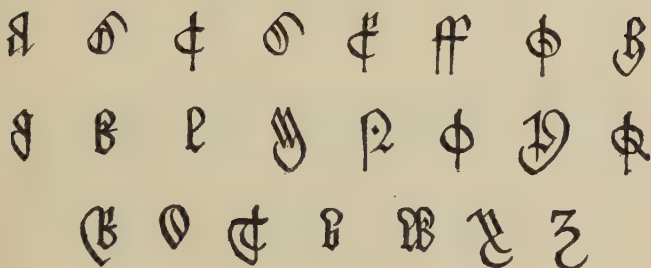
Astle on Writing, p. 145.

English. 4.

Aa Bb Cc Dd Ee
Ff Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr
Ss Tt Uu Vv Ww Xx Yy Zz.

Running Chancery.

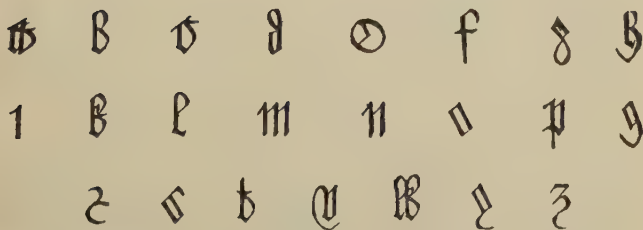
See the above.

English. 5.

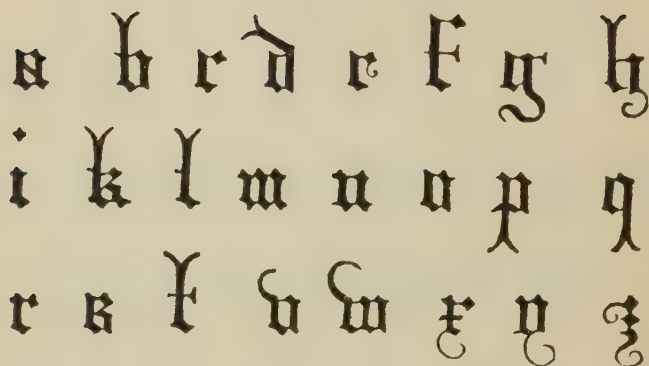
Court or Exchequer Text. The Court of Exchequer was erected by William the Conqueror, its model being taken from a similar one established in Normandy long before his time.

These characters were invented by the English lawyers about 1550, and continued in use till the beginning of the late reign, when it was abolished by Act of Parliament.

Astle on Writing, p. 145.

English. 6.

The lower case or small letters corresponding with the above.

English. 7.

Church Text. As the lawyers had alphabets appropriated to various purposes, it seemed reasonable that ecclesiastics should not be behind in invention, especially as they were esteemed the curators of all learning for five centuries; they therefore invented this alphabet for the use of the church.

English. 8.

And whereas by Indenture of assignment bearing date on or about the sixth day of June in the Year of our Lord one thousand seven hundred and eighty seven made betwixen the said Edmund Fry

Secretary. Invented in the sixteenth century, and has been used ever since by English lawyers, in engrossing their conveyances and legal instruments.

Astle on Writing, p. 146.

Ethiopic.

Called also Amharic, from Amhara, the chief city of Abyssinia. The dialects of this language vary in the different provinces subject to Ethiopia ; but the same character or letter, which Bruce calls the Geez, is used to express the several tongues of Amhara, Geez, Falasha, Galla, Damot Agow, Tcheratz Agow, and Gafat ; and that it was invented by a Cushite shepherd.

Bruce, v. 1, p. 401.

ለቡኑ፡ ዘበሰጣዎት፡ ይትቀደስ፡ ስሎብ፡ ትመጽእ፡ መንገ
ሠትክ፡፡ ይኩኑ፡ ፍቃክ፡ በከወ፡ በሰጣይ፡ ወበመድረኝ፡፡
ሲሳዖኑ፡ ዘለለ፡ ዕለተኑ፡ ሀበኑ፡ ዮሎ፡፡ ሓድግ፡ ለኑ፡ ለበሰኑ፡
ከወ፡ ንሐኝ፡ ንሓድግ፡ ለዘ፡ ለበሰ፡ ለኑ፡፡ ወሊቲብእኑ፡
ወስተ፡ መንሲት፡፡ ለሳ፡ ለድኅኝ፡ ወበልሐኑ፡ ለመኩሉ፡
እኩይ፡፡ እከወ፡ ዚላክ፡ ይእቲ፡ መንገሠት፡ ሓይል፡ ወስብ
ሐት፡ ለዓለወ፡ ዓለወ፡ ለጫኑ፡፡ ለቡኑ፡ ዘበሰጣዎት፡ ይ
ትቀደስ፡ ስሎብ፡ ትመጽእ፡ መንገሠታክ፡፡ ይኩኑ፡ ፍቃደ

This specimen is the Lord's Prayer in the Ethiopic character.

Orat. Dom. p. 14.

Etruscan. 1.

The Etruscans, or Etrurians, as Latin history informs us, were the most ancient people of Italy. Some authors assert, that soon after the universal deluge, Noah established there twelve cities or tribes, who used the same letters or characters, which were en-

trusted to the priests alone, who varied them according to their pleasure, as to their order and value or import; writing them sometimes from left to right, or the reverse. There is no doubt but the Etruscan and Pelasgic alphabets are to be traced to the same origin. See Astle on these alphabets.

A	B	Ʒ	d	Ǝ	f	z	Θ
a	b	g	d	ě	f	z	ē
⊙	l	K	✓	M	N	Ɔ	1
th	i	k	l	m	n	ō	p
	q	z	ʎ	8	ψ		
	r	s	t	ph	ps		

This specimen is copied from the *Encyc. Franc.* pl. 8.

Duret, p. 757.

Etruscan. 2.

◊	u	M	√	I	Ǝ	/	8
a	b	c	d	e	f	g	h
Ǝ	R	z	Ɔ	Ǝ	⊥	Y	Z
i	k	l	m	n	o	p	q
X	√	Ǝ	7	Δ	H		
r	s	t	u	x	y		

This character, which is written from left to right, Theseus Ambrosius says, is to be found in many libraries in Italy.

Duret, p. 757. Le Clabart, p. 624.

Etruscan. 3.

h	g	f	e	d	c	b	a
q	p	o	n	m	l	k	ii
il	ch	z	x	v	t	s	

On the aforesaid authority we have also this character, which is written from right to left.

Duret, p. 758. Le Clabart, p. 623.

Franks. 1.

The Franks, who survived the destruction of Troy, about 1140, B. C. came and settled in the low countries of Germany, under Marcomin their leader, where the Saxons afforded them an asylum near the mouths of the Rhine; whence, after some time, they made frequent and vigorous attacks upon their neighbours, and were in continual wars against the Romans and Gauls upwards of nine hundred years; and extended their empire over great part of Europe, according to Hunibauld, who informs us, that Vuastbal wrote in this character an account of their conquests, and every thing remarkable during seven hundred and fifty-eight years.

Duret, p. 865.

a	b	c	d	e	f	g	h
i	k	l	m	n	o	p	r
s	t	x	y	ph	ch	ps	o

This alphabet is given on the authority of the Abbé Triteme.

Franks. 2.

The language of this people, called *Lingua Franca*, is a kind of jargon spoken on the Mediterranean, particularly the coasts of the Levant, composed of Italian, Spanish, French, vulgar Greek, and other tongues.

Massey, p. 103.

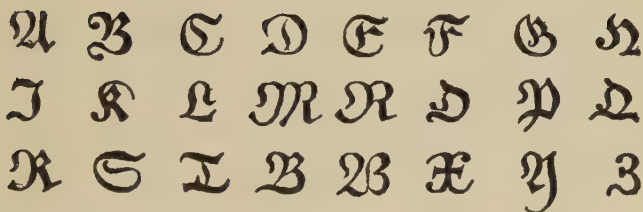
							
a	b	c	d	e	f	g	h
							
i	k	l	m	n	o	p	q
							
	r	s	t	u	x	y	

French. 1.

							
a	b	c	d	e	f	g	h
							
i	k	l	m	n	o	p	q
							
	r	s	t	u	x	y	

This alphabet was used in France in the fifth century, under the first race of their kings.

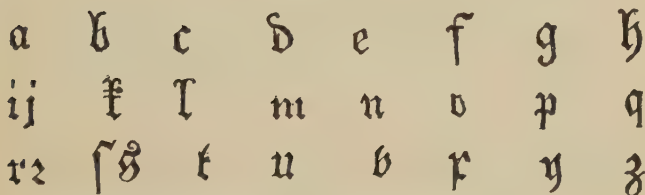
Fourn. v. 2, p. 262.

German. 1.

This alphabet shews the capital letters in use for their general printing.

Fourn. v. 2, p. 267.

Encyc. Franc. pl. 10.

German. 2.

These are the lower case or small letters to the above.

Id. Ib.

Gothic. 1.

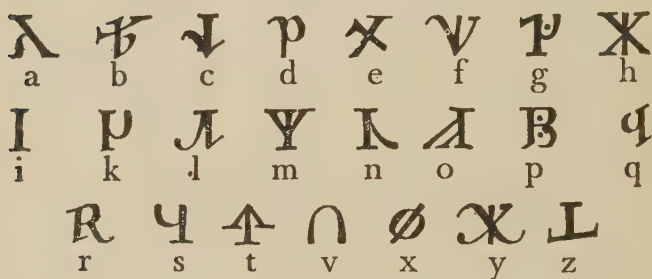
In the history of the North, we are informed that Ulphilas or Gulphila, bishop of the Goths, who lived in Mæsia about A. D. 370, was the first who invented the letters or characters of his nation ; and that he translated the holy Scriptures out of the Greek into his proper language. Jean le Grand gives him full credit for the latter, but insists that the letters were in use before the bishop's time. Other historians assert, that the Goths always had the use of letters, and what confirms this sentiment is, that Le Grand, in

his history of Gothic characters, says, that before or very soon after the flood, there were found, engraved in letters on large stones, the memorable acts of great men.

Olaus Magnus, brother to Le Grand, assures us, that the Goths wrote upon wood and upon the bark of trees worked into sheets, and sometimes on skins ; and that they used ink made of coal finely ground, with milk or water,

It is asserted by different authors, that they wrote the Celtic and Teutonic.

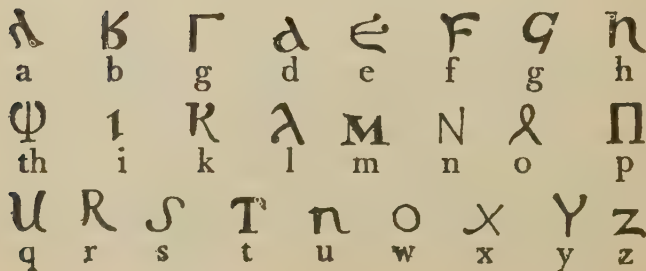
Duret, p. 862. Olaus Mag. p. 14.



This is given as the earliest Gothic, and seems to have great affinity to the Runic.

Fourr. v. 2, p. 271. Duret, p. 862. Le Clabart, p. 379.

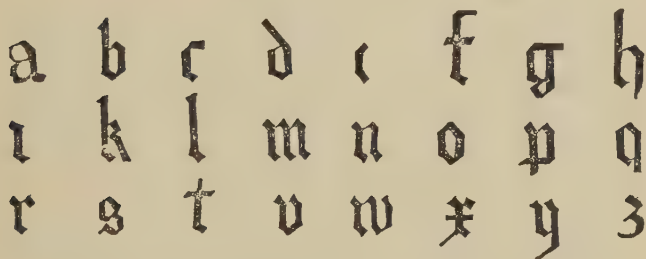
Gothic. 2.



This character, which is formed of the Greek and Latin, is attributed to Ulphilas, bishop of the Goths before mentioned, who is said to have invented them about A. D. 388.

Spanh. Dissert. p. 114. Dr. Morton's Tables. Massey, p. 103.

Gothic. 3.



This alphabet, which is much like the German, has been a long time in use in France: it is attributed to Albert Durer, who flourished early in the sixteenth century.

Encyc. Franc. pl. g

Greek.

Those countries which did not speak the Greek language, employed the characters of it. Cæsar found them in use among the ancient Gauls, and there can be no doubt but the Roman language and characters were derived from the same sources as the Greek.

Before the victories of Alexander, this language was principally confined to Turkey in Europe, Sicily, Dalmatia, Anatolia, and the islands of the Archipelago; his generals and successors extended it over many parts of Asia and Egypt; so that from the time of Alexander to that of Pompey, it may be considered as having been the most general language of the world; and what is truly astonishing it continues to be spoken in a manner which would have been intelligible to the ancient inhabitants of Greece.

This is, perhaps, an instance of the greatest longevity of language; few others having continued living and intelligible more than five hundred, whereas the Greek has survived three thousand five hundred years.

The causes of this will be found in the structure of the language itself, the extent of its use, and the great merit of the authors who have written in it; as historians, orators, poets, philosophers, mathematicians, and theologians. The New Testament, as well as the early fathers, are also written in Greek.

In this, the terms of art are very significant, which is the reason that modern languages borrow so many technical terms from it. When any new invention, instrument, machine, &c. is discovered, recourse is generally had to the Greek for a name, the facility with which words are compounded, affording such as are expressive of its use; viz. pantographia, music, barometer, eidouranion, philosophy, &c. &c.

Besides the copiousness and significancy of this language, wherein it excels most, if not all others, it has three numbers, viz. a singular, dual, and plural; also abundance of tenses in its verbs, making a variety in discourse, and prevents that dryness always accompanying too great an uniformity, and renders it peculiarly proper for all kinds of poetry.

It is not an easy matter to assign the precise interval between the modern and ancient Greek, which is to be distinguished by the terminations of the nouns, pronouns, verbs, &c. not unlike what obtains between some of the dialects of the Italian and Spanish.

There are also, in the modern Greek, many new words not to be met with in the ancient; we may therefore distinguish three ages of this tongue, the first of which ends at the time when Constantinople became the capital of the Roman empire, about A. D. 360; from which period the second continued till the taking of that city by the Turks, in 1453; and the third from that to the present time.

When we compare the ancient Greek with the Phenician and Samaritan alphabets, no doubt can remain of their origin; and it is probable, that the use of letters travelled progressively from Chaldea to Phenicia, and thence along the coast of the Mediterranean, to Crete and Ionia, whence it might readily have passed over into Greece,

As Inachus and Cecrops were said to have been Egyptians, as was Agenor, the father of Cadmus, some have supposed that the Greeks received their alphabet from Egypt; if this be true, we must confess that the Egyptians at that time used the same letters with the Phenicians.

The opinion most generally received is, that Cadmus, the Phenician, introduced the first Greek alphabet into Bœotia, where he settled B. C. 1500; and this sentiment is supported on the authorities of Herodotus, Diogenes Laertius, Pliny, Plutarch, and others among the ancients, and on those of Scaliger, Salmásius, Vossius, Bochart, and other moderns.

Many believe, however, and not without weighty arguments on their side, that the Greeks had an alphabet before the time of Cadmus*. Josephus, on the other hand, in his answer to Apion, about the antiquities of the Jews, says, that the Greeks having failed in producing any authentic memorial of the antiquity of their alphabet, it became afterwards a question, whether the use of their letters was so much as known at the time of the Trojan war, which was decided in the negative.

The original alphabets contained only the letters essentially necessary; other single consonants, the double ones, and the long vowels, being the result of subsequent improvement.

The alphabets of all languages, as well as the laws of all nations, ought to be in a state of progressive improvement. † It is probable, that the first alphabets were very defective in the number of their characters, and that additions were successively made, when the same letter was observed to represent different sounds.

Greece and Etruria appear to have been the first parts of Europe in which alphabets were used.

The first European alphabet is proved to have been the Pelasgic or Etruscan, of which the original or radical letters are given in No. 1. and 2.

Astle, on the radical letters of the Pelasgians, p. 5, informs us, that “ the alphabet, which the Pelasgi first brought into Italy, and which has been called their original alphabet, was probably carried out of Phenicia before the Phenicians themselves had augmented the number of radical letters, of which it was originally composed.

* See Astle on the Origin of Writing.

† See Astle on the radical letters of the Pelasgi and Etruscans.

This alphabet consisted of thirteen letters, according to Dr. Swinton ; but according to Father Gori, who appears to have been better informed, the original alphabet consisted only of twelve letters. As these authors differ materially, it may be proper to give both alphabets."

Greek. 1.

/	⌘	V	⌘	8	⌘	⌘	A
i	h	f	f	f	f	e	a
†	2	9	1	И	M	↓	⌘
t	s	r	p	n	m	l	k

The most ancient inscriptions in the Pelasgian characters and language, are those found at Eugubium, a city in Umbria, in the Appenines, A. D. 1456.

Astle on Writing, p. 64.

This is Dr. Swinton's radical Pelasgian alphabet, and has thirteen characters or sounds.

Astle on the Pelasgian character, p. 5.

Greek. 2.

M	↓	⌘	⌘	⌘	l	⌘	A
m	l	k	k	k	i	e	a
8	⌘	V	†	2	9	1	⌘
v	v	v	t	s	r	p	n

The radical Pelasgian alphabet of Father Gori, containing twelve characters or sounds, which Astle supposes to be the most correct.

Astle on the Pelasgian character, p. 5.

Astle in the same work, p. 13, thinks the additional letters were derived from the radicals in the following manner, viz.

K diminished, produced the Roman C and Greek Γ.

Π augmented or condensed, became B and aspirated Φ.

Σ becomes Z in most languages.

T naturally produces Δ and Θ.

F or Υ produced O and Ω, and perhaps ε.

Ξ is KΣ, and Ψ is ΠΣ.

The X was doubtless the guttural sound of Gh or Ch.

Greek. 3.

<i>Α</i>	<i>Β</i>	<i>Γ</i>	<i>Δ</i>	<i>Ε</i>	<i>Ζ</i>	<i>Η</i>	<i>Θ</i>
a	b	ě	f	g	z	h	th
<i>Ι</i>	<i>Κ</i>	<i>Λ</i>	<i>Μ</i>	<i>Ν</i>	<i>Ξ</i>	<i>Π</i>	<i>Ρ</i>
i	k	l	m	n	s	p	ph
		<i>Χ</i>	<i>Ψ</i>	<i>Ω</i>			
		ch	r	ps	t		

This Pelasgian alphabet is also taken from the Eugubian tables, and contains twenty letters.

Encyc. Franc. pl. 8.

Hebrew.

In page 234, the nature of the disputes respecting the antiquity of the Hebrew alphabet has been given. It is unnecessary therefore to recapitulate here the arguments of Origen and Jerome.

Hebrew. 1.

ח	ז	ו	ה	ד	ג	ב	א
hh	z	v	h	d	g	b	a
ע	ס	נ	מ	ל	כ	י	ת
aa	s	n	m	l	k	i	th
ת	ש	ר	ק	צ	פ		
t	sch	r	q	tz	p		

When the ten tribes revolted from Rehoboam, the son of Solomon, they placed themselves under the direction of Jeroboam, the son of Nebat, and settled in Judea, where they preserved their ancient letters; but Esdras, or his son Jesus, who were in the true religion, invented this, from which the present Hebrew is said to be taken.

Duret, p. 129.

Hebrew. 2.

ח	ז	ו	ה	ד	ג	ב	א
hh	z	v	h	d	g	b	a
ע	ס	נ	מ	ל	כ	י	ת
aa	s	n	m	l	k	i	th
ת	ש	ר	ק	צ	פ		
t	sch	r	q	tz	p		

Hebrew. 3.

hh	z	v	h	d	g	b	a
aa	s	n	m	l	k	i	th
t	sch	r	q	tz	p		

These two alphabets are attributed to King Solomon, by Theseus Ambrosius, in his *Appendice des différentes lettres et des différentes langues*; but he does not offer any authority. He also asserts, that that prince had many treatises written in them, of which Apollonius Thianeus was the translator and commentator.

Duret, p. 132.

Imperial,

a	b	c	d	e	f	g	h
i	k	l	m	n	o	p	q
r	s	t	u	x	y	z	&

This alphabet is a fourth, attributed to Charlemagne, in the beginning of the ninth century, but seems to have been written for some particular purpose.

Fourn. v. 2, p. 272.

Japonese.

あ	え	い	お	う	ふ	へ	ひ
a	je	i	o	u	fa	fe	fi
け	ふ	か	け	き	こ	く	ま
fo	fu	ka	ke	ki	ko	ku	ma
め	み	も	む	ssa	sse	ssi	ssu
me	mi	mo	mu	ssa	sse	ssi	ssu
す	や	じ	か	よ	ゆ	だ	で
ssu	ja	je	ji	jo	ju	da	de
ち	ぞ	つ	ら	れ	り	ろ	る
dsi	do	tzu	ra	re	ri	ro	ru
な	ね	に	の	ぬ	な	ね	に
na	ne	ni	no	nu	n'a	n'e	n'i

The Japoneses have three different alphabets, two of which are in general use among the natives; the other only at court, and among the great.

The specimen we have given is the most common, and, like the Chinese, is written from top to bottom.

Encyc. Franc. pl. 24.

Irish.

General Vallancy, in his essay on the antiquity of this language, has given a full comparative vocabulary of Irish and Punic-Maltese words, with their significations; also a comparative declension of a noun of each tongue, of the same meaning; and he is decidedly of opinion, that it is, through the Pœni or Carthaginians, derived from the Phenician; that, on a collation of this language with the Celtic, Punic, Phenician, and Hebrew, the strongest affinity, (nay perfect identity in very many words) will appear; and that it may therefore be deemed a Punic-Celtic compound.

Irish. 1.

							
b	l	f	s	n	h	d	t
							
c	cc	m	g	ng	i	r	a
							
	o	u	e	i			

This is the most ancient Irish alphabet, and is said to be named Bobeloth, from certain masters who assisted in forming the Japhetian language, but it is obviously denominated from Bobel, Loth, its two first letters.

Ledwich's Antiquities, p. 98.

Irish. 2.

							
b	l	n	t	s	h	d	t
							
c	q	m	g	ng	sd	r	a
							
	o	u	e	i			

Irish. 3.

								
b	l	f	s	r	h	d	t	c
								
m	g	ng	r	a	o	u	e	i
								
ia	ai	eqi	ua	eg	feo	oai	oai	oai

These two alphabets, called Irish Ogums, the first named Croabh and the other O'Sullivan's, being derivatives from Roman notes, were first stenographic, than steganographic, then magical, and lastly alphabetic. Oga, Ogum, and Ogma, are old Celtic words, implying letters written in cypher, and, indirectly, an occult science. Ogan, in Welch, is augury, divination.

Ledwich, p. 90, &c.

Malabaric.

അ	ആ	ഇ	ഈ	ഉ	ഊ	ഋ	ൠ	
ă	ā	ĩ	ī	ũ	ū	rũ	rū	
ല	ള	എ	ഐ	ഒ	ഔ	അമ്	ഈഃ	
lũ	lū	e	ai	o	au	am	ah	
ക	ഖ	ഗ	ഘ	ങ	ച	ഛ	ജ	
k	kk	g	gg	ngh	c	cc	g	gg
ട	ത	ദ	ധ	ന	ത	ത	ദ	
gn	t	tt	d	dd	n	t	tt	d
ഡ	ന്	പ	ഫ	ബ	മ	യ	ര	
dd	n	p	pp	b	bb	m	j	r
ല	വ	ശ	ഷ	സ	ഹ	ല	ക	
l	v	s	sz	s	h	l	kc	

This is the most correct alphabet in use in the Malabar country, whence great care has been taken to obtain it, the first sixteen letters being vowels, and the remaining thirty-five being simple consonants or radicals.

Mæso Gothic.

“The Goths here spoken of, inhabited Mæsia, a vast tract of country, now comprehended in Turkey, not far from the northern borders of Greece, whose language, with different dialects, probably extended over all the North of Europe, nearly in the same latitude from the coast of Norway to the Black Sea. Dr. Hickes observes the great similarity in the formation of the major part of these letters and the Greek alphabet, with an internal evidence of the affinity, if not the consanguinity, between the two languages. The Doctor, however, goes farther, and points out a very striking feature of resemblance in the pronunciation of the letters *gg*, *γγ*, when in contact, by observing, that in this situation, the first *g* had in the Mæso Gothic the sound of *n*, as it has in the Greek. This he exemplifies in the Gothic word *gaggan* (to go), which he tells us, from such pronunciation, produced the Saxon word *gangan*.”

See *Grammatica Anglo-Saxonica*, p. 43, whence our verb “to gang.”

Λ	Β	Γ	Δ	Ε	ƿ	Ʒ	h
a	b	g	d	e	f	gj	h
ī	Ʒ	Λ	Μ	Ν	ƿ	Π	Θ
i	k	l	m	n	o	p	hp
Ʒ	Ʒ	Ʒ	Ψ	Ʒ	Ʒ	Ʒ	Ʒ
r	s	t	th	q	w	ch	z

This letter is also attributed to Ulphilas, and was used in the translation of the holy Scriptures.

Norman. 1.

The Normans, Northmans, or people from the north, emigrated from Denmark, Sweden, Norway, &c. and spread themselves over Gaul, but particularly Neustria, which name they soon changed to Normandy; and during the ravages they were making upon the coast, and other parts, before they could settle themselves, to cover their deliberations and councils, they invented a new alphabet, (according to Bede), in which were only ten principal characters much like Greek; the other fourteen were formed by uniting those to others, as in the following specimen,

Duret, p. 866.

α	β	γ	λ	ε	Ϝ	ζ	Η
a	b	c	d	e	f	g	h
ι	Ι	Ια	Β	Ιγ	Ιλ	Ιε	ΙϜ
i	k	l	m	n	o	p	q
Β	ΙΗ	ΙϞ	Κ	Κα	Κβ	Κγ	Κλ
r	s	t	u	w	x	y	z

Norman. 2.

Α	ϸ	ρ	Ϡ	Ϣ	ϣ	Χ	Χ
a	b	c	d	e	f	g	h
Λ	Ψ	Α.	Ε	Ϻ	ϣ	Ϡ	ϣ
i	k	l	m	n	o	p	q
Ϻ	ϣ	Ϡ	ϣ	Ϡ	ϣ	Ϡ	ϣ
r	s	t	u	x	y	z	&

This alphabet is given on the authority of the venerable Bede.

Duret, p. 866.

Anglo-Norman.

Called by Astle, modern Gothic ; by the French, *lettres tourneures* ; they were much used in adorning and illuminating Roman missals, from one of which this specimen was taken.

Persian. 1.

دلا که روشنی شمی برا فروز
 ز شمع آتش بر پستیدن پیاموز
 ز خاطر دور کن آتش برستی
 در آتش خانه خاطر نشستی

Called Taleek. This is a verse copied by Sir William Ouseley, from a very ancient Persian manuscript.

Persian. 2.

ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ
tcha	gjia	gha	pa	ba	ă	â	â
ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ
tha	cha	zha	za	ou	va	ha	da
ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ	ٲ
sa	na	ma	ta	gha	ca	i	ya

This alphabet, which is taken from Hyde's edition *de Religione veterum Persarum*, is called Zend or Pazend, and is supposed to have been used by Zoroaster.

Encyc. Franc. pl. 16.

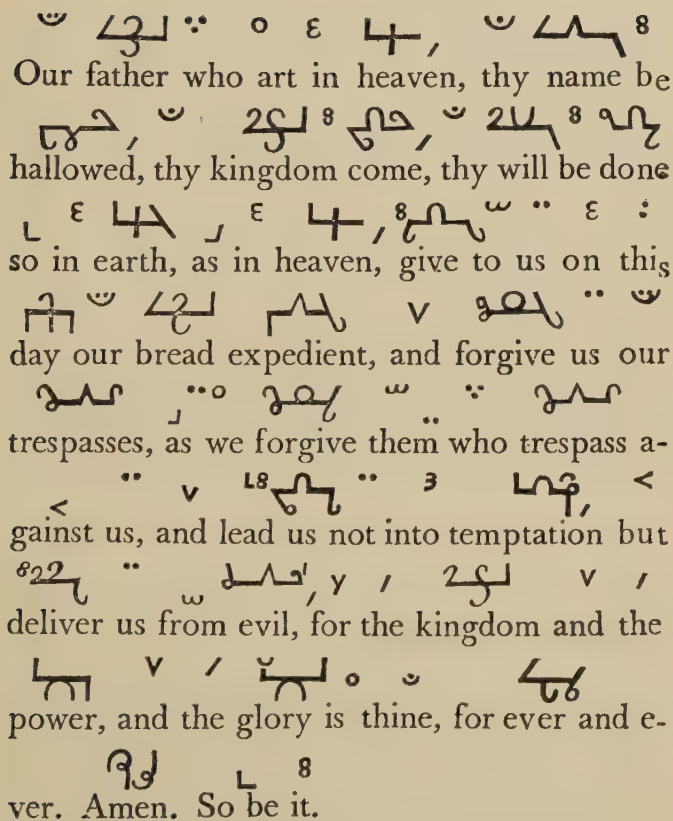
Philosophic. 1.

<i>o</i>	<i>α</i>	<i>a</i>	<i>e</i>	<i>i</i>	<i>u</i>	<i>y</i>	<i>h</i>	
ō	aw	ā	ě	ēē	oo	u	huh	
<i>g</i>	<i>k</i>	<i>ſ</i>	<i>ŋ</i>	<i>n</i>	<i>r</i>	<i>t</i>	<i>d</i>	<i>l</i>
gi	ki	sh	ng	n	r	t	d	l
<i>ſ</i>	<i>z</i>	<i>h</i>	<i>h</i>	<i>f</i>	<i>v</i>	<i>b</i>	<i>p</i>	<i>m</i>
s	ez	th	dh	f	ev	b	p	m

In a very curious letter from the late Dr. Franklin, in answer to Miss S****, written in this character, according to the usual mode of spelling and pronunciation, the reader will find the Doctor's arguments for, and recommendation of his reformed mode of spelling. See Dr. F.'s Works, 8vo. Lond. 1806, vol. 2, p. 362.

The alphabet is copied in the order and manner given by the author, p. 470.

Philosophic. 2.



 Our father who art in heaven, thy name be
 hallowed, thy kingdom come, thy will be done
 so in earth, as in heaven, give to us on this
 day our bread expedient, and forgive us our
 trespasses, as we forgive them who trespass a-
 gainst us, and lead us not into temptation but
 deliver us from evil, for the kingdom and the
 power, and the glory is thine, for ever and e-
 ver. Amen. So be it.

The above is an attempt of the late learned Bishop Wilkins towards a real character and philosophical language; but he expresses himself sensible, that this contrivance is not brought to that degree of perfection to which it might have been upon further consideration and practice. For the information of our curious readers, we refer them to

Samaritan. 1.

							
hh	z	v	h	d	g	b	a
							
aa	s	n	m	l	k	i	th
							
t	sch	r	q	ts	p		

The modern Samaritan alphabet, copied by the late Dr. Morton, from a manuscript in the Cottonian library in the British Museum, and was by him esteemed the most correct of any extant.

Dr. Morton's Table.

Samaritan. 2.

:םאדבזש אדגא נשם שדעמ :שמששפם דנמפא
 זששחז :מאאפ דבז שמששפ אששז דנמא מומ
 אא דבז חזבז :שמח דבז בא דשממ שממ אפ
 זאז :דבאדגח מזבז דבחזב אששז דבאדגח
 בז מז :פאש דבמח שא מז :דמבז דבאמפא
 :בשא שמשזבז שזבז דגשז דגדגד אדבזש

The Lord's prayer, the literal reading of which is the same as the Hebrew.

Orat. Dom. p. 10.

Saracen. 1.

							
a	b	c	d	e	f	g	h
							
i	k	l	m	n	o	p	q
							
r	s	t	tsi	v	x	y	z

This character, according to Theseus Ambrosius, was used by the Saracens at the time of their conquests.

Duret, p. 475.

Saracen. 2.

							
h	g	f	e	d	c	b	a
							
q	p	o	n	m	l	k	i
							
z	y	x	v	t	s	r	

This alphabet is handed to us on the authority of John Baptist Palatin, a Roman citizen, in a learned treatise, "teaching to write in all languages and letters, both ancient and modern."

Duret, p. 475.

Saracen. 3.

reh	he	ez	tech	te	b	a	ayn
dgh	ta	cda	sad	sch	za	nun	dal
mym	la	lam	caph	khav	fl	la	vua

Duret gives this alphabet as a Saracen, which seems to have some affinity to the Arabic. See this author, “*De la comparaison du savoir Arabesque et Sarrasinesque, avec l’Egyptien, Chaldaïque, &c.*” p. 477.

Saracen. 4.

hh	z	v	h	d	g	b	a
aa	s	n	m	l	k	i	th
t	sh	r	q	ts	p		

On the authority of Kircher this alphabet is given in

Dr. Morton’s Table.

Saxon. 1.

A	B	C	D	E	F	G	H
a	b	c	d	e	f	g	h
I	K	L	M	N	O	P	Q
i	k	l	m	n	o	p	cu
R	S	T	Ð	V	X	Y	Z
r	s	t	dh	u	x	y	z

The form of this letter at the time of the Saxon invasion, about the year 450, according to Gibson's Chronicle, seems to have been quite unknown; but Dr. Johnson thinks this people were so illiterate, as most probably to have been without any alphabet.

The above, which is the most ancient Saxon character, is taken from

Dr. Morton's Table.

Saxon. 2.

Åa	Bb	Cc	Dð	Ðð	Ee	Ff	Gg
hh	Ii	Kk	Ll	Mm	Nn	Oo	Pp
Rr	Ss	Tt	Ww	Xx	Yy	Zz	

The modern Saxon alphabet, cast at the Type-street Letter Foundry.

Saxon. 3.

Fader vnen þu arð in þeornar, rie gehal-
 zud Noma ðin to cýmeð ric ðin. rie rillo
 ðin ruæ is in þeorne 7 in Eorða. Þlaſ uf-
 erne oferþrytlic ſel us to dæg, 7 ſonzer
 us ſcýlða urna ruæ pe ſonzeron ſcýlzum
 urum. And ne inlead uſið in Coſtnunze.
 Ah zerþrych ſom Evil.

What the Saxon tongue was, long before the conquest, may be observed in the most ancient manuscript of that language, being a gloss on the Evangelists, by Eadfride, eighth bishop of Lindſarne, about A. D. 700, from which the above is taken.

Camden's Remains, p. 23.

Saxon. 4.

Fæder ure þu þe earþ on heorenum, ri þin
 nama Gehalzod to be cume þin rice; ze-
 purþe þin rilla on eorþan rpa rpa on heore-
 num, urne ze dægþpanlican hlaſ ſýle us to
 dæg. And ſonzyr us ure zýltar, rpa rpa pe
 ſonzyvaþ urum zýltendum. And ne zelæd-
 de þu us on coſtnunz. Ac Alýre us of ýrle.

The above Lord's prayer is said to have been translated by King Alfred, A. D. 875.

Wilk. Ess. p. 7.

Servian. 1.

А	В	Г	Д	Е	Ж	З
a	b	v	g	d	e	x
Ѥ	Ѧ	Ѩ	Ѭ	Ѯ	Ѱ	Ѳ
tz	ix	k	l	m	n	o
Р	І	Т	У	Ф	Х	Ѳ
r	s	t	u	ph	ch	od
						th

Servian. 2.

А	В	Г	Д	Е	Ж	З	И
a	b	g	d	e	x	z	iz
Ѧ	К	Ѭ	Л	М	Н	Ѱ	П
ix	j	c	l	m	n	o	p
Р	І	Т	Ф	Х	Ѳ	Ѳ	Ш
r	s	t	v	ch	o	th	sch

These are the characters used in the most eastern parts of Europe, and are said to have been invented by St. Jerome.

Duret, p. 733.

Servian. 3.

А	Б	В	Г	Д	Е	Ж	З
a	b	v	g	d	e	ch	z
Ѣ	И	Ѥ	Ѧ	Ѩ	К	Л	М
z	i	td	y	k	l	m	
Н	Ѧ	О	П	Р	Г	Т	У
n	x	o	p	r	s	t	u
Ѳ	Ф	Х	Ѳ	Ѳ	Ѳ	Ѳ	Ѳ
v	f	h	ps	o	sct	cz	c

This alphabet is attributed to St. Cyrillus, and, like the above, is used in the eastern parts of Europe. It was invented about the year 700.

Fourn. v. 2, p. 275. Encyc. Franc. pl. 11.

Syriac. 1.

Ⲭ	Ⲑ	Ⲗ	Ⲅ	Ⲍ	Ⲅ	ⲛ	Ⲁ
hh	z	v	h	d	g	b	a
ⲁ	ⲟ	ⲛ	ⲙ	Ⲍ	Ⲅ	ⲛ	ⲙ
aa	s	n	m	l	k	i	th
ⲛ	ⲙ	ⲛ	ⲟ	Ⲅ	ⲛ		
t	sch	r	q	ts	p		

Duret, p. 365, says, that this alphabet is composed of small, or running letters, with which the Syrians write more freely on account of their joining.

Syriac. 2.

Ⲭ	Ⲑ	Ⲗ	Ⲅ	Ⲍ	Ⲅ	ⲛ	Ⲁ
hh	z	v	h	d	g	b	a
ⲁ	ⲟ	ⲛ	ⲙ	Ⲍ	Ⲅ	ⲛ	ⲙ
aa	s	n	m	l	k	i	th
ⲛ	ⲙ	ⲛ	ⲟ	Ⲅ	ⲛ		
t	sh	r	q	ts	p		

This is the modern alphabet, as used in printing at this day.

Syro-Galilean.

hh	z	v	h	d	g	b	a
aa	s	n	m	l	k	i	th
t	sh	r	q	ts	p		

This is more properly called an ancient Chaldean, and is said to have been used by some oriental christians, calling themselves disciples of John the Baptist. They inhabited the city of Bassora and its environs.

Encyc. Franc. pl. 7.

Syro-Hebraic.

hh	z	v	h	d	g	b	a
s	n	n	m	l	k	i	th
t	sh	r	q	ts	p	aa	

This character was much used formerly by the Jews in Syria.

Fourn. v. 2, p. 227.

Tartaric. 1.

ᠠ	ᠡ	ᠢ	ᠣ	ᠤ	ᠥ	ᠦ	ᠨ	ᠬ	ᠭ
pa	pa	ka	na	ou	ou	o	i	e	a
ᠷ	ᠬ	ᠶ	ᠲ	ᠲ	ᠮ	ᠯ	ᠲᠠ	ᠰᠠ	ᠰᠠ
ra	khe	ya	ts	ts	ma	la	tha	sca	sa
ᠰ	ᠰ	ᠲᠡ	ᠲᠢ	ᠵ	ᠲᠰ	ᠲᠢ	ᠰᠠ	ᠲᠠ	ᠠ
sci	se	tche	tchi	ja	tsa	tca	fa	oüa	

The Mantcheou Tartars use the same alphabet or characters as those of the Great Mogul, and write them from top to bottom, after the manner of the Chinese.

The above is a specimen of the initial letters.

Encyc. Franc. pl. 23.

Tartaric. 2.

ᠠ	ᠡ	ᠢ	ᠣ	ᠤ	ᠥ	ᠦ	ᠨ	ᠬ	ᠭ
pa	pa	ka	na	ou	ou	o	i	e	a
ᠷ	ᠬ	ᠶ	ᠲ	ᠲ	ᠮ	ᠯ	ᠲᠠ	ᠰᠠ	ᠰᠠ
ra	khe	ya	ts	ts	ma	la	tha	sca	sa
ᠰ	ᠰ	ᠲᠡ	ᠲᠢ	ᠵ	ᠲᠰ	ᠲᠢ	ᠰᠠ	ᠲᠠ	ᠠ
sci	se	tche	tchi	ja	tsa	tca	fa	oüa	

A specimen of the medial letters of the alphabet of the Mantcheou Tartars.

Encyc. Franc. pl. 23.

Tartaric. 3.

ᠠ	ᠡ	ᠢ	ᠣ	ᠤ	ᠥ	ᠦ	ᠨ	ᠬ	ᠠ
pa	pa	ka	na	ou	ou	o	i	e	a
ᠷ	ᠬ	ᠶ	ᠲ	ᠲ	ᠮ	ᠯ	ᠲ	ᠰ	ᠰ
ra	khe	ya	ts	ts	ma	la	tha	sca	sa
ᠰ	ᠰ	ᠲ	ᠲ	ᠵ	ᠲ	ᠲ	ᠲ	ᠲ	ᠲ
sci	se	tche	tchi	ja	tsa	tca	fa	oüa	

A specimen of the final letters of the alphabet of the Mantcheou Tartars.

Encyc. Franc. pl. 23.

Talenga.

ᠠ	ᠡ	ᠢ	ᠣ	ᠤ	ᠥ	ᠦ	ᠨ	ᠬ	ᠠ
ă	ā	ĩ	ī	ou	ou	rou	rou		
ᠯ	ᠯ	ᠡ	ᠠ	ᠣ	ᠠ	ᠠ	ᠠ	ᠠ	ᠠ
loū	loū	e	aĩ	o	aou	au	āha		
ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ
ka	k'ha	ga	g'ha	nga	tcha	tcha	ja		
ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ
j'ha	igna	ta	t'ha	da	d'ha	na	ta	t'ha	
ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ
da	d'ha	na	pa	p'ha	ba	b'ha	ma	ya	
ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ	ᠬ
ra	la	oa	chā	chā	sa	ha	la	k'cha	

This is the alphabet of a province of the powerful kingdom of Decan, in India ; the language is vulgarly called Badega. In the French library is a Grammar and other books in this tongue.

Encyc. Franc. pl. 19.

Tamoulic.

𑌀	𑌁	𑌂	𑌃	𑌄	𑌅	𑌆	𑌇
kă	nă	scha	gna	da	na	ta	na
𑌈	𑌉	𑌊	𑌋	𑌌	𑌍	𑌎	𑌏
pa	mă	ja	ră	la	vă	ra	la
			𑌐	𑌑			
			rra	na			

This is also called Malabaric, and has been usually written on palm-leaves with a pointed tool, but it is now much in use in India in letter-press printing.

This radical alphabet is taken from

Encyc. Franc. pl. 19.

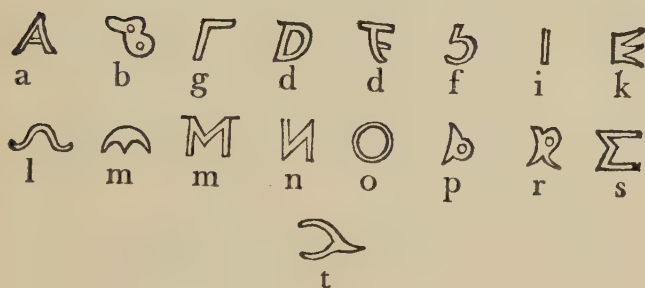
Teutonic. 1.

𐌆	𐌇	𐌈	𐌉	𐌊	𐌋	𐌌	𐌍
a	b	c	d	d	f	g	h
𐌎	𐌏	𐌐	𐌑	𐌒	𐌓	𐌔	𐌕
i	l	m	n	o	p	q	r
		𐌖	𐌗	𐌘	𐌙		
		s	t	u	x		

This alphabet was taken from an ancient manuscript in the cathedral of Wurtzberg, in Franconia.

Fourn. v. 2, p. 272.

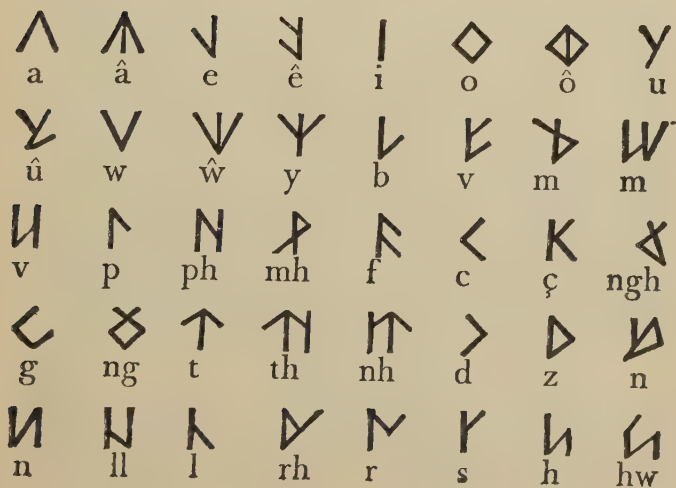
Teutonic. 2.



This alphabet is taken from

Encyc. Britan. pl. 9.

Welch. 1.



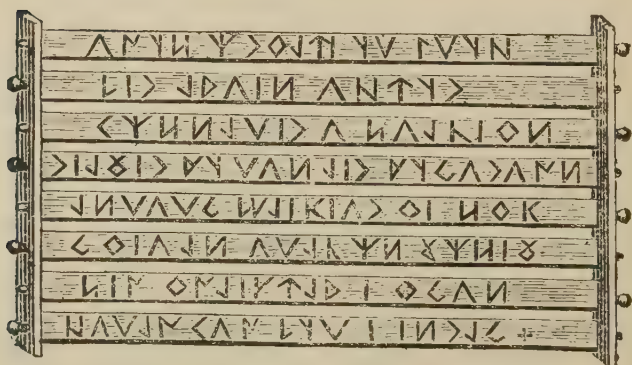
The alphabet of these primitive letters contains sixteen radical characters and powers, which have twenty-four secondary ones, modifications, or inflexions, making forty in all ; and it went under the name of *Coelbren y Beirz*, the billet of signs of the Bards, or the Bardic Alphabet.

The discerning antiquary will naturally be desirous of knowing in what manner this curious relic was preserved to the present time ; in reply to which, in the obscure and mountainous parts of Wales, the system of Bardism is still to be found entire, but more known to the world by the name of Druidism, which was properly that branch of Bardism relating to religion and education. Bardism was universal, and comprehended all the knowledge or philosophy of the ancient times ; Druidism was its religious code, and Ovatism, its arts and sciences.

The preservation of the character may be principally attributed to its own provision and means, whereby tradition is reduced to a science.

We are indebted for this and the following article to the ingenious W. Owen, F. A. S. whose authority cannot be doubted.

Welch. 2.



The original manner of writing among the ancient Britons was by cutting the letters with a knife upon sticks, which were most commonly squared, and sometimes formed into three sides ; consequently a single stick contained either four or three lines. (See

Ezekiel, ch. xxxvii. v. 16.) The squares were used for general subjects, and for stanzas of four lines in poetry; the trilateral ones were adapted to triades, and for a peculiar kind of ancient metre, called Triban, and Englyn Milwyr, or triplet, and the warriors' verse.

Several sticks, with writing upon them, were put together, forming a kind of frame, as represented in the annexed page, which was called Peithynen or Elucidator, and was so constructed, that each stick might be turned for the facility of reading, the end of each running out alternately on both sides of the frame.

The following is a literal reading of this curious specimen in the modern orthography, with a correct translation.

Aryv y doeth yw pwyll :
 Bid ezain alltud :
 Cynnewid a haelion :
 Diengid rhywan eid rhygadarn :
 Enwawg meiciad o'i voc :
 Goiaen awel yn nghyving :
 Hir oreistez i ogan :
 Llawer car byw i Indeg.

Translation.

The weapon of the wise is reason.
 Let the exile be moving.
 Commerce with generous ones.
 Let the very feeble run away ; let the very powerful proceed.
 The swineherd is proud of his swine.
 A gale is almost ice in a narrow place.
 Long penance to slander.
 The frail Indeg has many living relations.

CHAP. XI.



Of Mathematical, Algebraical, and Geometrical Sorts.

+ STANDS for *plus*, or *and*, or *with* ; as, 9 *plus* 3, 9 and 3, 9 with 5.

— signifies *minus*, or *less* ; as, 14 *minus* 2, or 14 wanting 2.

= means *equal* ; as, $9 + 3 = 14 - 2$; *i. e.* 9 and 3 is parallel or equal to 14 wanting 2.

∞ This sign also denotes *equal*, but is become obsolete.

× is the sign for multiplication.

:: shews a geometrical equal proportion ; as, $6.2 :: 12.4$; that is, 6 is to 2, as 12 to 4.

: or ∴ is an arithmetical equal proportion ; as, $7.3 : 13.9$; *i. e.* 7 is more than 3, as 13 is more than 9.

∴ A continued geometrical proportion, or geometrical progression ; as, $16.8.4.2.1$; *i. e.* 16 is to 8, as 8 to 4, as 4 to 2, as 2 to 1.

÷ Arithmetical progression, continued; as, 19. 16. 13. 10. 7. 4; i. e. 19 is more than 16, as 16 is more than 13, as 13 is more than 10, as 10 is more than 7, as 7 is more than 4.

□ Quadrat, or regular quadrangle; as, $\square AB = \square BC$; i. e. the quadrangle upon the line AB is equal to the quadrangle upon the line BC.

△ Triangle; as, $\triangle ABC = \triangle ADC$.

∠ An angle; as, $\angle ABC = \angle ADC$.

⊥ Perpendicular; as, $AB \perp BC$.

▭ Rectangled parallelogram; or the product of two lines.

√ Radix, root, or side of a square.

≻ Greater.

≺ Lesser.

—: The differences, or excess.

Q or q, a square.

C or c, a cube.

QQ The ratio of a square number to a square number.

These, and several other signs and symbols, we meet with in mathematical and algebraical works; though authors do not confine themselves to them, but express their knowledge different ways; yet so as to be understood by those skilled in the science. In algebraical work, therefore, in particular, gentlemen should be very exact in their copy, and compositors as careful in following it, that no alterations may ensue after it is composed; since changing and altering work of this nature is more troublesome to a compositor than can be imagined by one that has not a tolerable knowledge of printing. Hence it is, that very few compositors are fond of algebra, and rather chuse to be employed upon plain work, though

less profitable to them than the former, because it is disagreeable, and injures the habit of an expeditious compositor besides. In the mean time we venture to say, that the composing of algebra might be made more agreeable, were proper cases contrived for the letter and sorts belonging to such work, where it is likely to make a return towards its extraordinary charges.

Of Celestial and Astronomical Signs.

I. The names of the twelve signs of the zodiac.

♈ Aries	♎ Libra
♉ Taurus	♏ Scorpio
♊ Gemini	♐ Sagittarius
♋ Cancer	♑ Capricornus
♌ Leo	♒ Aquarius
♍ Virgo	♓ Pisces

II. The names of the nine planets.

♄ Saturnus	♀ Venus
♃ Jupiter	☿ Mercurius
♂ Mars	♁ Georgium Sidus
♁ Earth	☉ Sun ☾ Moon

♈ The dragon's head, and

♏ The dragon's tail, are the two points in which the eclipses happen

III. The names of aspects.

♄ Conjunctio happens when two planets stand under each other in the same sign and degree.

♄ *Oppositio* happens when two planets stand diametrically opposite each other.

♊ *Trigonus* happens when one planet stands from another four signs, or 120 degrees ; which make one third part of the ecliptic.

♋ *Quadril* happens when two planets stand three signs from each other, which makes 90 degrees, or the fourth part of the ecliptic.

* *Sextile* is the sixth part of the ecliptic ; viz. two signs, which make 60 degrees.

☾ Denotes a new moon.

☾ First quarter of the moon.

● The full moon.

☾ Last quarter of the moon.

Of Physical Signs and Abbreviations.

℞ Stands for *Recipe*

℔ for a pound

℥ for an ounce

ʒ for a drachma

℥ for a scruple

j stands for 1 ; ij for 2 ; and so on

ſ signifies *semi*, or half

gr. denotes a grain

One pound makes 12 ounces

One ounce contains 8 drachmas

One drachma is equal to 3 scruples

One scruple consists of 20 grains

One grain has the weight of a barley-corn

M. signifies a handful

P. means so much as can be taken betwixt the ends of two fingers

P. æq. stands for equal parts

Ana. signifies, so much of the one as of the other

q. s. as much as is sufficient

q. p. as much as you please

s. a. according to art

CHAP. XII.

*On the Construction of Printing-Presses.*

HAVING endeavoured to lay before our readers the necessary information connected with the compositor's business, we will now call their attention to a most important branch of the art—the *press-work*. What is generally termed *fine work*, has been progressively improving since the time of the ingenious Baskerville; and it may with truth be said, that the British press at this moment stands unrivalled for the beauty of its execution; but this, like many other improvements, has its attendant evils. The wages paid for fine work is generally double the amount of those allowed for the common; this great disparity has rendered the pressmen careless and indifferent in their execution of common work, which, we are sorry to observe, has greatly degenerated of late years. But before we enter on the practical directions to the pressmen, it will be necessary to make some observations on the common press, and the late improvements upon it.

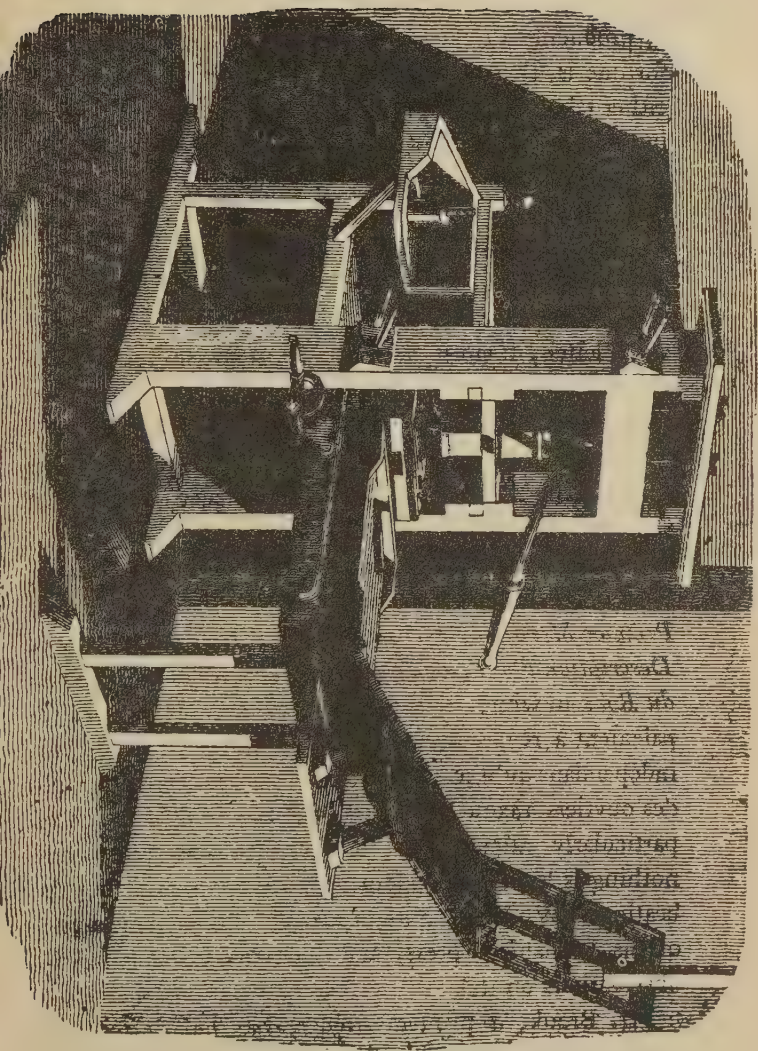
This press is constructed on the true principles of mechanism, with much simplicity and harmony; and when kept in proper order, by an intelligent pressman acquainted with its principles and operation, is capable of producing a clear and perfect impression; but the misfortune is, that few pressmen can be found, possessing either talent or ingenuity, or who feel the smallest interest in the execution of their work. Unless they are engaged on established high wages, their grand aim is to get through as much work as possible, paying little regard to neatness and uniformity.

The common press does not, without great labour, produce an adequate impression, from heavy works in small letter; it must therefore be an important point to gain an accession of power, with, at the same time, a diminution of labour. This is most completely done by the Stanhope press, which is capable of ten times the force of the common press, with, perhaps, a tenth of the labour.

Earl Stanhope, in the formation of his iron press, must have found many useful hints in *M. Anisson's Premier Mémoire sur l'Impression en Lettres, suivi de la Description d'une Nouvelle Presse exécutée pour le Service du Roi*; in which he says—"Je me suis attaché principalement à rendre son action et ses mouvemens le plus indépendans qu'il m'a été possible, du maniement déréglé des ouvriers auxquels elle est confiée." This has been particularly attended to in the Stanhope press, and nothing is left to the judgment of the pressman but the beating. We shall, in its proper place, introduce a view of his Lordship's press, and then make some further observations on it.

Mr. Brook, a printers' joiner, has lately improved the common press, on the Stanhopian principle; though

The Common Press.



it be by no means equal to the Stanhope, yet it comes nearer to it than any thing that has been hitherto attempted;—a view and description of this press will be given. In the mean time we will present to our readers a view of the common press, and the parts dissected, drawn by Mr. Blunt, an ingenious and intelligent artist, and engraved on wood by Mr. Branston, well known for his excellence in that art.

Various alterations and improvements in the construction of this press have taken place since the introduction of the art of printing into this country. William Jansen Blaew, about the year 1620, made considerable improvements in it, which were generally adopted throughout Holland several years before they were introduced among us.

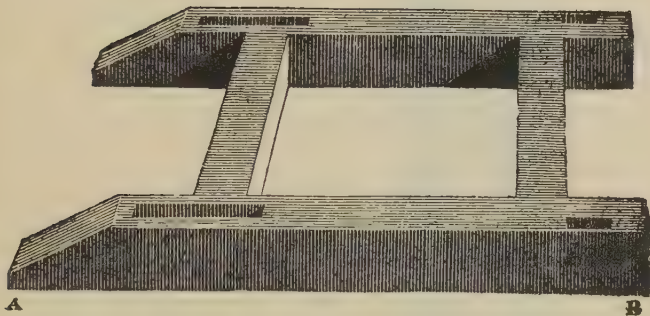
This ingenious artist was an eminent printer at Amsterdam, and also famous for his astronomical and geometrical productions. In the early part of life he was bred up to joinery, in which employment he served an apprenticeship. Being of an inquisitive disposition, he rambled to Denmark, about the time the famous Tycho Brahe established his astronomical observatory, by whom he was entertained, and under whose instruction he was employed in making mathematical instruments, in which curious art he made very considerable improvements; in consequence of which it was generally reported that all or most of the sidereal observations published in Tycho's name, were made by Blaew, as well as the instruments.

Before these observations were published to the world, Tycho, to gratify Blaew, gave him the copies of them, with which he went to Amsterdam, and there practised the making of globes according to those observations. As his trade increased, he found it necessary to deal in geographical maps and books, and became so particularly

curious in his plates, that many of the best globes and maps were engraved by himself; and by his frequent connexions with printing of books, got so good an insight in the practical part of the art, that he set up a printing-office for the transaction of his business; wherein he soon found the inconveniences attending the structure of the old presses, which induced him to contrive remedies to every inconvenience, and in that succeeded so much to his expectation, that he caused nine of them to be made, each of which he called by the name of one of the nine Muses.

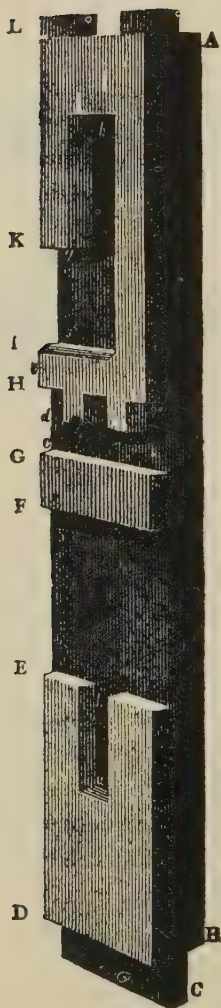
The excellence of the improvement soon became known to other printing-offices, which induced their proprietors to follow Blaew's example, so that presses of his construction became, in the course of a few years, almost general throughout the Low Countries, and from thence, notwithstanding the opposition of the ignorant, were introduced into England.

Many improvements were made by different persons on Blaew's press. The engraving here given is an accurate description of the common press now in use, and which has been generally used, with very little variation, for above 50 years. It consists of the following parts: the feet, cheeks, cap, winter, head, till, hose, garter, hooks, spindle, worm, nut, eye of the spindle, shank of the spindle, toe of the spindle, plattin, bar, handle of the bar, hind-posts, hind-rails, wedges of the till, carriage, outer frame of the carriage, iron ribs, wooden ribs on which the iron ribs are fastened, stay of the carriage, coffin, plank, gallows, tympan, frisket, points and point screws. These are the different names of the parts of the press; but to convey a more perfect idea of its construction, perspective and geometrical views of the principal parts are here given in the order in which a press is generally put up.

The Feet.

A to B, 3 ft. 1 in. and 5 in. square.

The feet are thirty-seven inches long, and five inches square; the distance asunder, one foot, ten inches. Three inches and three quarters from each end, the mortise holes are to be made, on the middle of the breadth of the upper side of the foot, for receiving the tenons of the cheeks and hind-posts. The mortise holes for the cheeks are eight inches long; those for the hind-posts, two inches and a half, and one foot seven inches asunder. For the sake of ornament, the ends may be bevelled off according to the taste of the joiner, but care must be taken not to weaken them by so doing.

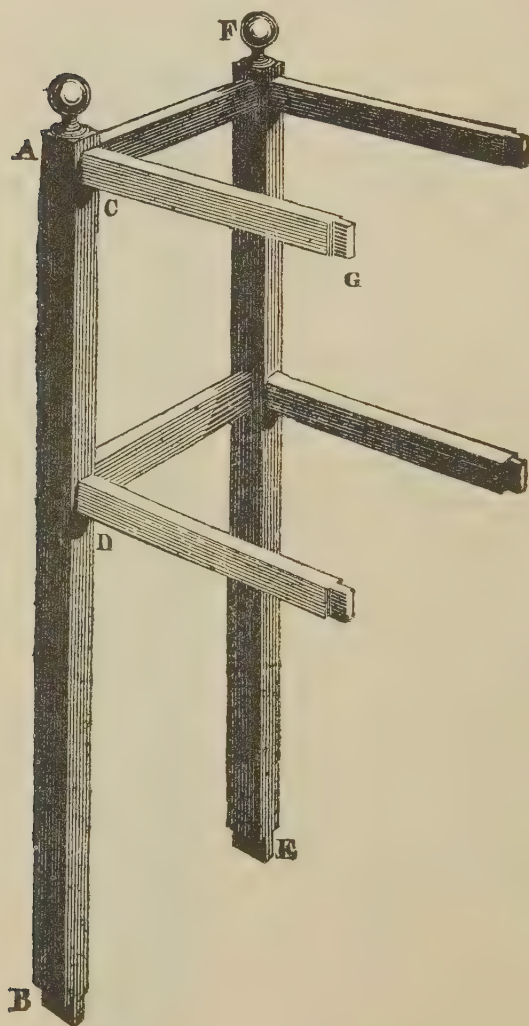
The Cheeks.

A to B	6 ft. 1 in.
B to C	0 3 and a half
D to E	1 10
E to F	1 1
F to G	0 4
G to H	0 5
H to I	0 3
I to K	0 9 and a half
K to L	1 2 and a half
a to b	0 7 and a half
c to d	0 2 and a half
d to e	0 2 and a half
g to h	0 8

The cheeks are six feet, one inch long, and eight inches and a half broad, and five inches thick, with a tenon at each end. The lower tenon enters the fore part of the foot, and is cut eight inches long, and three and a half deep, to fit the mortises. The tenon at the upper end of the cheek is cut across the breadth, and enters the cap within half an inch of the top.

The cheeks and the feet are fastened together with two wooden pins, distant from each other about three inches. Two feet, eleven inches, from the bottom of the cheek, one half of the thickness, of a foot and an inch long, is cut away, to admit a free passage for running in and out the coffin. In the middle of the lower shoulder of this cutting-away, is a mortise of seven inches and a half long, and three inches wide, in which is fitted a tenon made at each end of the winter. Four inches from the upper part of this cutting away, another is made, of the same depth, two inches and a half long, to admit a block two inches and a half thick, of the width of the cheek, on which the till rests. Above this, two mortise holes are made, two inches and a half long, corresponding with the tenons at the end of the till.

Three inches above the till, another piece is cut away, nine inches and a half long, and four inches wide, half through the breadth of the cheek, to admit the depth of the head. Just above this cutting-in, is made a square mortise in the middle of the cheek, two inches wide and eight inches long, for the tenons of the head to play in.

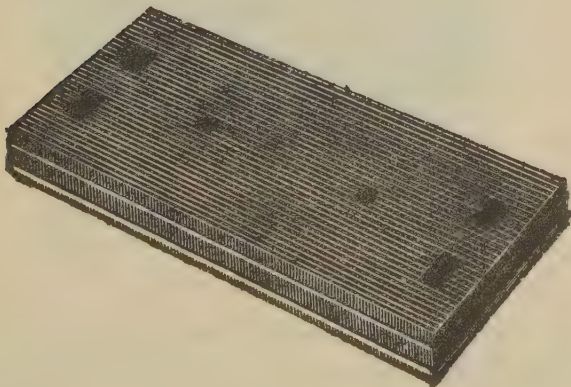
The Hind Posts and Rails.

The height or length of the posts, from A to B	4ft. 2 in.
Their distance asunder, from A to E	- - 2 2
Length of the rails, from C to G	- - 1 6
Their distance asunder, from C to D	- - 1 3 and a half

Six rails are fitted into the hind-posts, two of them behind, and two on each side ; one of the hind-rails to be placed two inches from the top, the other level with the upper side of the winter. These two rails are tenoned at each end, and made so long that the posts may stand even with the cheeks. These tenons are let into mortises made in the insides of the hind-posts, and fixed in with wooden pins.

The side-rails are tenoned at each end, and let into the mortises made in the cheeks and hind-posts, and fastened in the same manner by the hind-rails.

The Cap



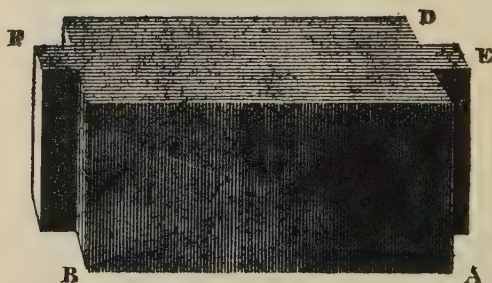
The cap is three feet long, eleven inches wide, and four inches thick. The front and two sides are ornamented with a neat moulding ; the front projecting about an inch and a half, and the sides three inches and a half, over the cheeks.

About three inches from each end, two mortise holes are made, to admit the tenons of the cheeks ; also two holes through which the head bolts pass.

In the centre of the lower hind-rail, one of the girths is either nailed or fastened with a screw.

On the top side-rails and hind-rail, the back-board is placed, for defending the ribs from dirt, and also affording a convenient shelf for the pressmen.

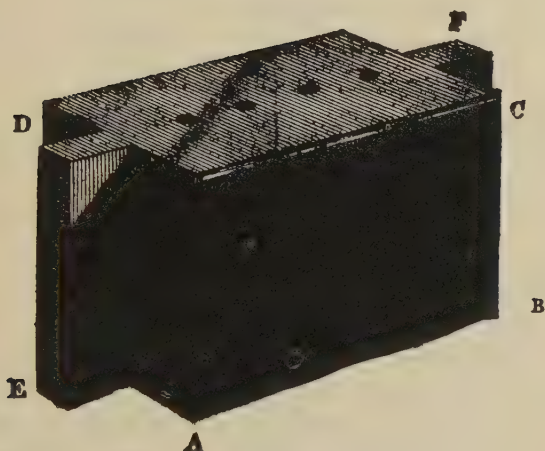
The Winter.



Length, from A to B	-	-	-	1 ft. 11 in.
A to C	-	-	-	0 9
C to D	-	-	-	0 9 and a half
Projection of the mortises, E and F	0	2		

The length of the winter, exclusive of the tenons, is one foot, eleven inches; the width, nine inches and a half; the depth, nine inches. The projection of each of the tenons is two inches. These tenons are made the whole depth of the winter, to fit and fall into the mortises in the cheeks.

The Head.



The length, from A to B	-	-	-	-	1	ft. 11	in.
Depth, from B to C	-	-	-	-	0	10	and a half
Width, from A to E	-	-	-	-	0	9	
Projection of the mortise, D and F	-	-	-	-	0	2	

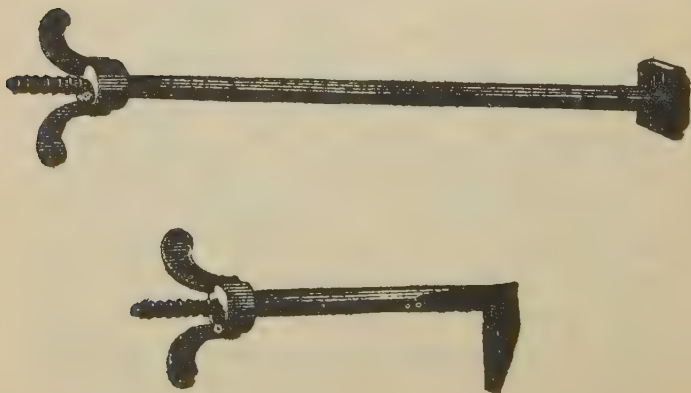
The length of the head, exclusive of the tenons, is the same as the winter, viz. one foot, eleven inches; the width, nine inches, and the depth, ten inches and a half. The projection of the tenons, two inches. The front of the head projects half an inch over the range of the front of the cheeks. The tenons, like the winter, are also cut from the top to the bottom of the head, and made to fit easily into the mortises in the cheeks.

In the centre of the bottom of the head, a hole is cut about four inches square and three inches and a half deep, to admit the brass nut in which the screw of the spindle

works. This nut is secured and kept in its proper place by means of iron bolts, about three quarters of an inch square and nine inches and a half long, which go quite through the head, having at their ends a hook turned square, to clasp upon the under side of the nut. At the top of these bolts there are screws that project about an inch above the head, which, by the help of nuts and washers draw the hook of the bolts close against the nut, and thereby keep it in a fixed and perpendicular position.

In the centre of the top of the head a small, round hole is bored, to admit oil into the nut and spindle when necessary.

Three inches from each end of the head, two bolts pass through that and the cap, of twenty inches in length, and about three quarters of an inch square. These bolts have a square head, which stop against, and are let in level with the under side of the head. They have coarse screws at the top, which are furnished with nuts and washers. Upon these bolts rests the weight of the head, and by them the head is screwed up or let down as occasion requires.



The Spindle.

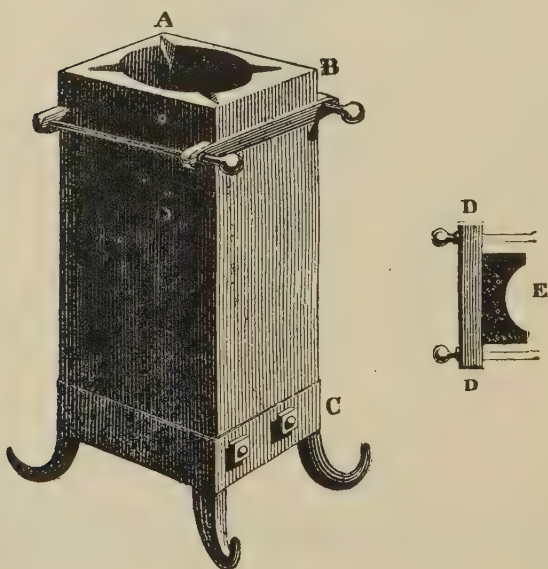


The length of the worm, from A to B	5 in.
B to C - - - - -	3 and a half
The distance across, from a to a -	3
C to D - - - - -	1 and a quarter
E to the toe - - - - -	11

The worm of the spindle should be made with such declivity, that it might come down at an assigned progress of the bar. In a whole revolution of the spindle in the nut, the toe ought to come down two inches and a half; but it seldom, at work, makes more than one quarter of a revolution, at one pull; in which sweep it comes down but five eighths of an inch.

The length of the worm is five inches, and its circumference, seven inches and a quarter. The whole length of the spindle is twenty-one inches. The bottom of the spindle is called the toe, which is about a quarter of an inch in diameter, made of well-tempered steel, that by long or careless use the point of pressure wear not on one side but remain in the axis of the spindle.

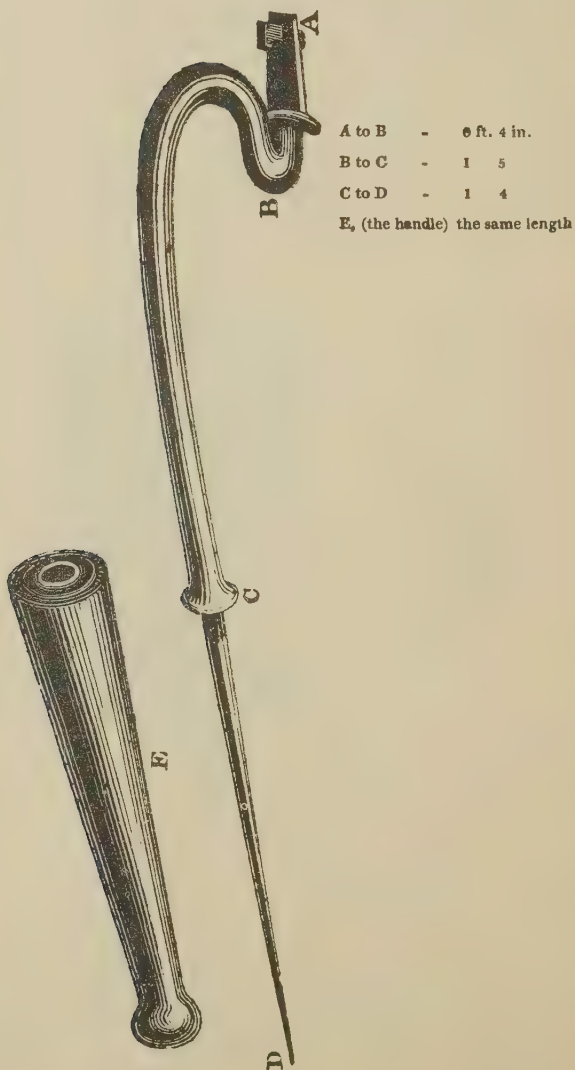
The Hose, Garter, and Hose Hooks.



The side, from A to B 4 in. and three quarters
The height, from B to C 10

The hose is composed of a long, square box, or block of wood, through which is turned a hollow cone, fitting the conical or tapering part of the spindle. The spindle is held firmly in this cavity of the hose, by the following

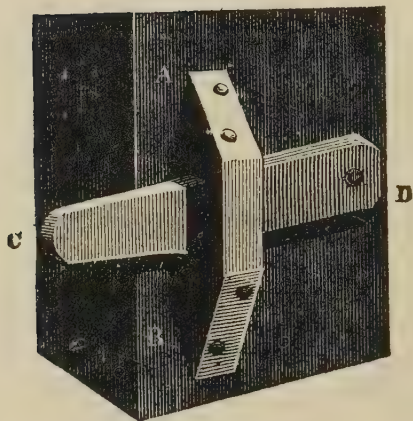
arrangement : To the inner face of the piece DD, and the corresponding pieces on the other side of the hose, are fixed curved pieces, as shewn at E, in the small figure. This is called the half-moon garter, and is used to hold the spindle by the groove E, (*see figure of spindle*) by tightening the screws shewn in the figure of the hose. The hose is cased with thin sheet iron, on every side, from the piece DD, downwards; and the hooks shewn at C, in the figure, are fixed to the lower end by nuts and screws.

Bar and Handle.

The bar is made of wrought iron, of about three feet long, and its greatest thickness, in circumference, five inches, except the shoulder. The square pin, about an inch and a half thick, and three inches long, from the shoulder, enters the eye of the spindle, which it should be made to fit with a great degree of nicety. At the end of this pin an eye is made, through which an iron key is put to fasten it perfectly tight to the spindle.

The wooden handle is twenty inches long, and, in the thickest part, ten inches in circumference. A taper hole is made through the handle, into which the small part of the bar enters, and is fastened by a screw at the end of the handle.

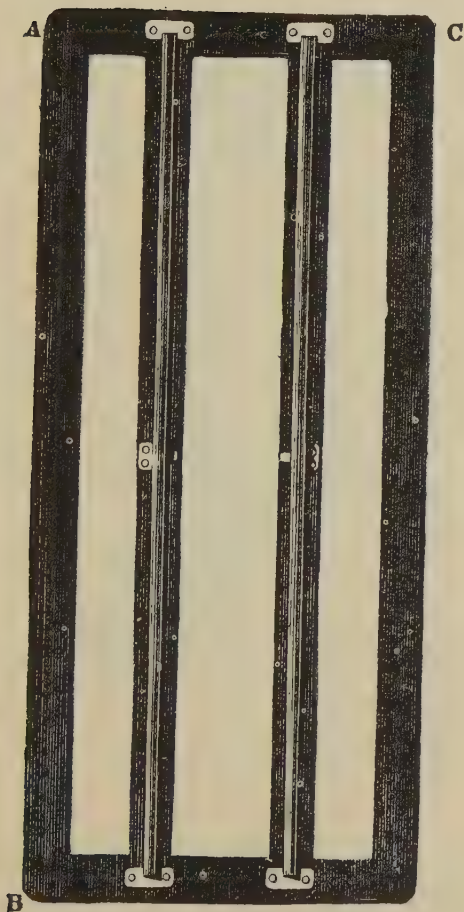
About four inches from the shoulder it is bent, agreeable to the above sketch, which lies ready to the pressman's hand, that he may catch at it to draw the handle of the bar within his reach.

Catch for the Bar.

Length of the piece A B, 8 inches and a half
 Ditto of the catch D C, 10 inches

The catch for the bar is made of two pieces of beech, in the form of a cross. The short piece is eight inches and a half long, and two inches wide, bevelled at each end, and in the centre of the side which is screwed against the cheek, a piece is cut out, about two inches long and half an inch deep, to admit the other piece of ten inches long, tapered off to the end on which the bar rests. This cross is screwed against the cheek, and fixed in such a position, as to retain the bar on its rebounding from the form.

The Carriage and Ribs.



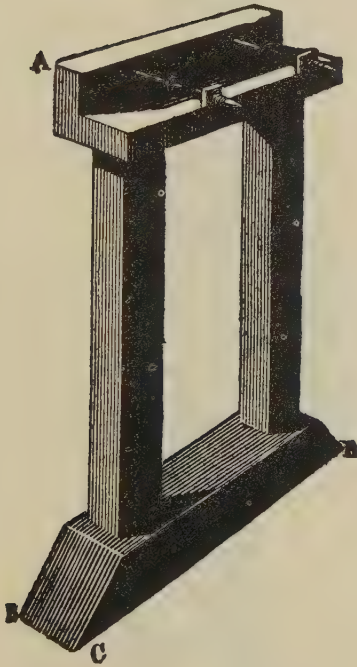
Length, from A to B 5 ft.

Width, from A to C 2 2 in

The carriage is a frame of five feet long, and two feet two inches broad, on which the ribs are placed. The two end rails are each four inches thick, and the side rails, two inches and a half thick.

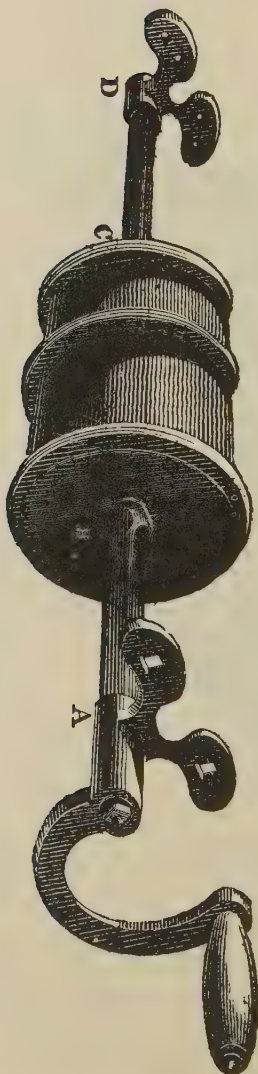
Between the two side-rails, are framed into the end-rails, two wooden ribs, two inches and a half broad, and an inch and a half thick. They are placed at an equal distance from each side-rail, and the same distance between each other. Upon these the steel ribs are fastened. These ribs are made about four feet, eight inches long, and an inch thick. The uppermost sides, on which the cramps rest, are of a convex form, the others perfectly flat. The two ends are flattened to about a quarter of an inch thick, and holes drilled for the purpose of fastening them to the end-rails. In the middle of the outer end of each rib, a small piece of iron, about a quarter of an inch thick, with holes drilled in it, projects, which is also nailed to the wooden ribs. The inner side of each rib is polished, to admit the shoulder of the two first and two last cramps. This is a late improvement on the common press. It prevents the shaking of the coffin, and the slur on the work which consequently attended it.

The ribs must be of an equal height and thickness, and lie exactly horizontal, in straight lines; for the smallest irregularity in this respect will affect the cramps, so as to render some of them useless.

The Fore-stay.

Height, from A to B 2 ft. 5 in.
 Width, from C to D 1 8

The fore-stay is made of four pieces of wood, mortised together for the purpose of supporting the end of the carriage, to which it is screwed by means of two inch-screws, of about five inches long, with nuts.

Spit and Wheel.

A to B	-	-	-	-	1 ft.
Length of the wheel or barrel, B to C	-	-	-	-	1 9 in.
Diameter of ditto	-	-	-	-	0 5
C to D	-	-	-	-	0 11
Length of the handle	-	-	-	-	0 5

The axis, or spit, is a straight bar of iron, about three quarters of an inch square, and is about three inches longer than the whole breadth of the carriage. The further end of it is filed to a round pin, three quarters of an inch long, and three quarters of an inch in diameter ; the near end is filed away to another round pin, but is two inches and a quarter long. At an inch and a quarter from this end, is filed a square pin, three quarters of an inch long ; and within half an inch of the end is another round pin, with a screw and nut on it.

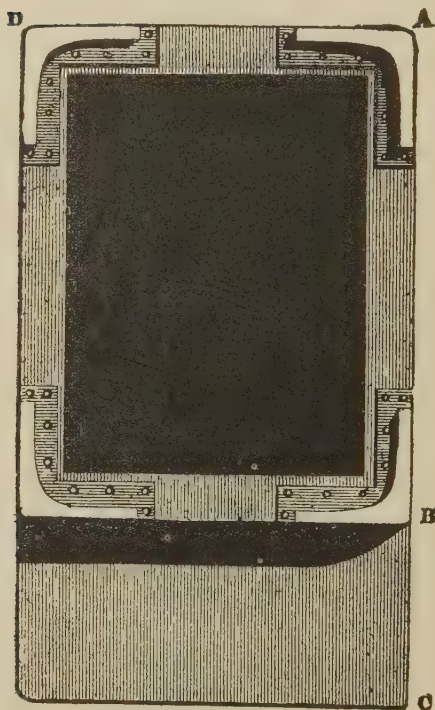
On the square pin is fitted a winch, on which is placed the rounce, five inches long.

The round ends of the spit are hung upon two iron sockets, fastened with screws on the outside of the two outer rails of the carriage.

The wheel, or girth barrel, is made of beech, of such a length that it may play easily between the ribs ; and of such diameter, that in one revolution a length of girth may wind about equal to half the length contained between the fore-end iron of the inner tympan, and the inside of the rail of the inner tympan.

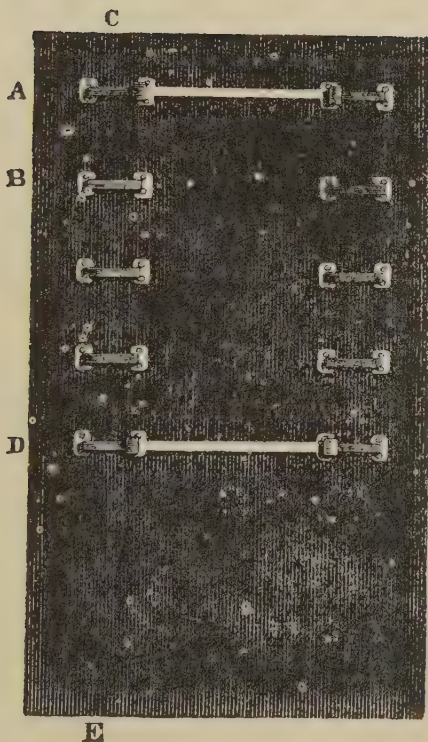
The Coffin, Plank, and Cramps.

Front View.



Length of the coffin, from A to B	- - -	2 ft. 7 in.
Width, from A to D	- - -	11
Projection of the plank beyond the coffin, B to C	0	11

Back View.



The dimensions as in the last figure

The distance of the cramps, from A to B 0 ft. 5 in.

A to C - - - - 0 3

D to E - - - - 1 3

The plank of the coffin is now invariably made of mahogany, three feet long, two feet wide, and one inch and a quarter thick, on which is fastened the cramps and

the coffin. The coffin is a square frame, two feet, seven inches long, two feet wide, and three inches deep ; in this the stone is bedded.

Upon each of the four corners of the coffin an iron plate, called a corner-iron, is let in and screwed perfectly level with the wood work, with return-sides about six inches long each side, an eighth of an inch thick, and two inches and a quarter broad. Upon the upper outer sides of each of these plates, another strong iron is fastened with two or three rivets through each side. This iron is half an inch deep ; the outer angles only are square, but the inner angles are obtuse, being sloped away from the inner angle, towards the farther end of each inner side, for the purpose of securing the chase with quoins.

At the hinder end of the frame of the coffin, two iron joints are fastened, by means of an iron plate, screw and nut, to receive the tympan, which have also two half-joints to match. These keep the tympan perfectly steady, without which it would be impossible to keep in register.

Gallows and Sockets.

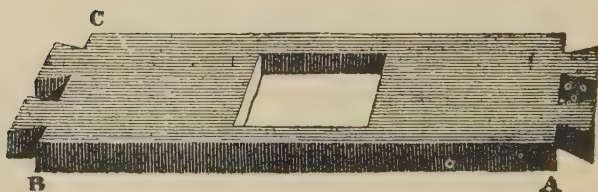
On the hind part of the plank, at three inches distant from each side, are nailed the sockets to receive the gallows, on which the tympan rest. The width of the gallows is two feet, its height nine inches. The sockets are seven inches long, two inches and a half wide, and two and a half deep. The socket holes are cut slanting, on which the gallows reclines. The sockets are screwed or nailed down on the plank, and may be easily moved backward or forward, to raise or lower the tympan, agreeable to the wish of the pressman.

In the space on the plank, between the sockets, one of the girths is fastened on with a thumb screw, which answers the purpose much better than nails, as they injure, and frequently split the plank.

The Press Stone.

Marble stones are the best ; and could the bedding of them in the coffin be always depended on, they would turn out to be the cheapest. Purbeck being much cheaper than marble, is now generally used.

The stone should be of an equal thickness, about a quarter of an inch less than the depth of the inside of the coffin, as the bedding will raise it the necessary height above the surface of the coffin. Its length and breadth must be a quarter of an inch less than the length and breadth of the inside of the coffin, to admit of justifiers between the stone and coffin, which are put to keep the stone steady after it is bedded. The face should be perfectly smooth and level.

The Till or Shelf.

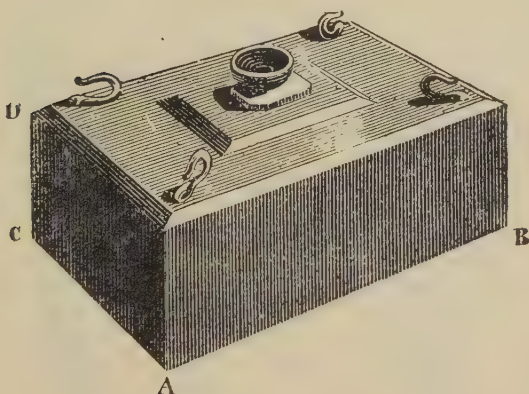
Length, from A to B	1 ft. 11 in.
B to C	0 9
The square for the hose	0 4 and three quarters

The till is made of mahogany, one foot, eleven inches long, nine inches wide, and two inches thick. It has two dovetail-tenons at each end, about an inch and a half

long, an inch broad, and an inch and a half distant from each other : these tenons are laid in the mortises in the checks.

In the middle of the till, a square hole of four inches and three quarters is made, lined with brass plate about the sixteenth of an inch thick, through which the hose passes. This square should be made to fit the hose with much nicety.

The Plattin.



Length, from A to B		1 ft. 7 in.
A to C	-	1 1
C to D	-	0 4

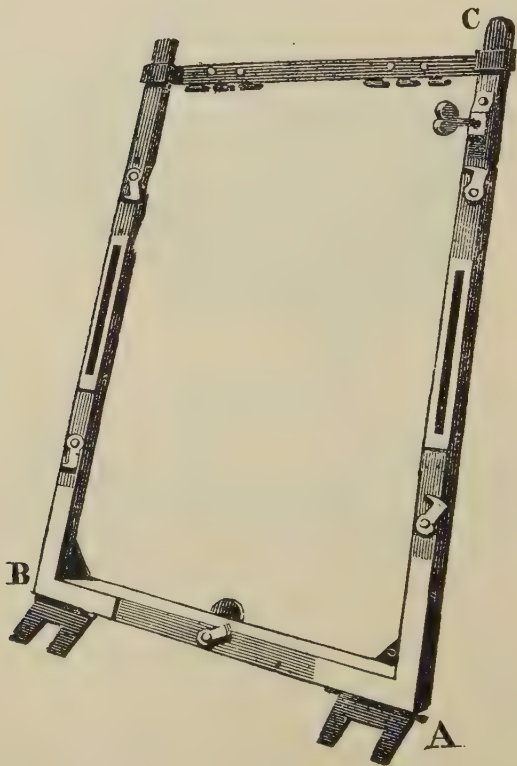
The plattin is made of mahogany, one foot, seven inches long, thirteen inches wide, and four inches thick. The face of the plattin must be perfectly level and smooth. Near the four corners, on the upper side, four iron hooks are placed, with their shanks wormed and screwed, and leaning towards the plattin plate.

In the centre of the plattin, the iron plattin plate is let in a quarter of an inch deep. This plate is eight inches long, four inches broad, and a quarter of an inch

thick. In the middle of it an iron frame, two inches square and half an inch high, is placed to receive the stud of the circular brass plattin pan. The stud is made to fit nicely into the iron frame, which keeps the pan firm and steady, and may be taken out with ease if required.

In the middle of the bottom of the pan is a small steel centre hole, in which the toe of the spindle works.

The Outer Tympan.



The length, from A to C	2 ft. 7 in.
A to B	2

The outer tympan is a square frame, both sides and one end of which are made of beech, and the other end of iron. It is two feet wide, and two feet, seven inches long. The breadth of the end, which is fastened to the coffin, by an iron match joint pinned on to another half joint, one inch and a quarter wide, and one inch deep; the two sides run taper from this to the iron end, which is about the thickness of a window casement, and half an inch wide. Upon the outer edge of this iron, about an inch and a half from the end of it, are made two iron half joints, to contain a pin, about three quarters of an inch in circumference, which, entering this half joint and the match joint in the frisket, fastens it securely, and enables it to work easily on the tympan.

In the middle of each side of the tympan, a mortise is made through, half an inch wide, and six inches long, to receive the square shanks of the point-screws, and to allow them to slide easily backward and forward.

The Inner Tympan.

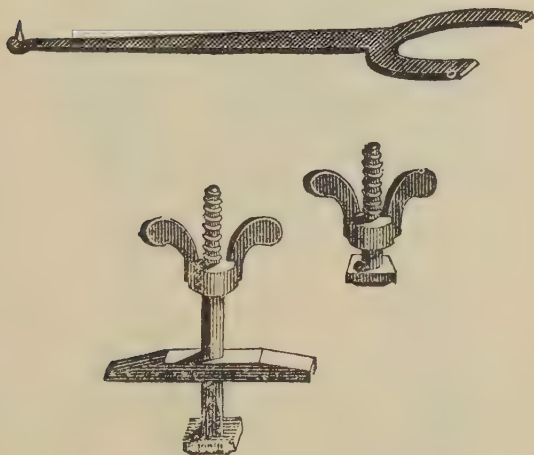
Length, from A to B	2 ft. 6 in. and a half
A to C	1 10

The inner tympan is also a square frame, one foot, ten inches wide, and two feet, six inches long, the sides and one end of which are also made of wood, and the other end of iron. It is made so much shorter than the outer tympan, that the outer edge of the iron of the inner tympan may be within the inner edge of the iron of the outer tympan; and it is made so much narrower than the inside of the outer tympan, that a convenient space may be allowed to

paste a vellum between the inside of the outer tympan and the outside of the inner tympan.

The two tympanans are fastened together by hooks fixed on the outer tympan, and eyes on the inner.

Points and Screws



Points are made of sheet iron, of different lengths about the sixteenth part of an inch thick, and in shape agreeable to the above cut. The spur of the point is rivetted at the small end, and projects about three eighths of an inch; the top of it is filed away to a fine point. The large end of the point fits into the square shank of the point screws. These screws are made of iron, with a thin head, about an inch square, and a square shank just under the head, an inch deep and half an inch square.

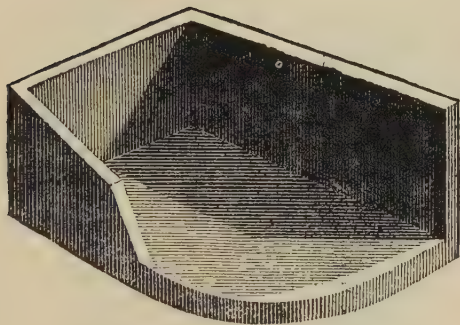
Under this shank a screw is made, with a nut and washer, which, when put through the outer tympan, draws the head of the shank close down to the tympan, and by that means secures the point in its proper place on the outer tympan.

The Frisket.



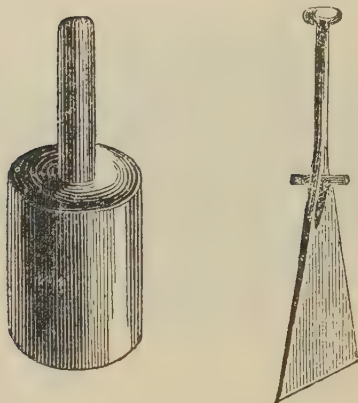
Length, from A to B	2 ft. 2 in. and a half
to C	1 9

The frisket is a thin iron frame, made of different sizes, with match joints at one end, through which an iron pin is placed. About the middle of the near side of the frisket, a small piece of iron projects, called a thumb piece.

The Ink-block.

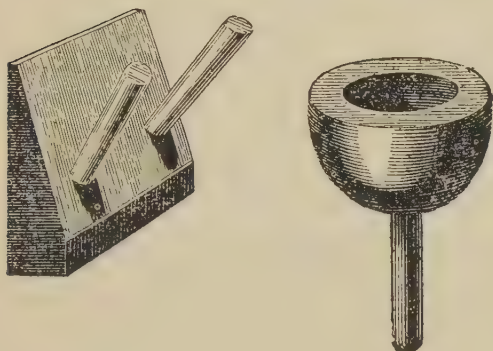
The ink-block is made of beech, the bottom of it two inches, and the sides three quarters of an inch thick ; its length thirteen inches, the depth four inches, and width nine inches.

This block is fastened to the near upper rail and hind post ; and the left hand outer corner of it is cut away.

The Brayer and Slice.

The brayer is also made of beech, and turned round on its sides, and flat on the bottom ; its length, including the handle, is about seven inches long, and the bottom part about two inches and a half in diameter.

The slice is a small iron shovel, the broadest part about four inches, and about the eighth of an inch thick. Its length, including the handle, is about eight inches long.

The Ball Stocks and Ball Racks.

The ball stocks are made of dry, well-seasoned elm, and turned hollow, of a conical form ; their greatest diameter five inches and a quarter, and their length four inches. The handle of the stock is made of beech, four inches and a half long, and an inch in diameter.

The racks are also made of elm and beech, the sockets of which are elm, and the pins beech. The sockets of the first rack, which is nailed on the near cheek, two feet nine inches and a half from the bottom, is nine inches wide, and four and a half long ; that end of it which receives the pins is one inch and a half thick, the opposite end only half an inch thick. The pins are nine inches long, and distant from each other three inches.

Another rack, double the width and containing four pins, is also fastened to the near cheek, eight inches from the top.

Bank and Paper-horse.

The bank is a deal table, three feet four inches long, twenty-two inches wide, and three feet high. About five inches from the bottom, a board is placed within two inches of the length and breadth of the bank, and fastened to the legs, which serves as a convenient shelf for pressmen to lay their worked-off heaps.

The paper-horse is also made of deal, two feet two inches long, and twenty inches wide, forming an angle of about forty-five degrees, six inches of the highest end of it rising nearly to a perpendicular. This horse receives the wet paper, and is placed on the bank near to the tympan.

CHAP. XIII.

*Practical Directions to Pressmen.*

CAREFUL, ingenious, and sober pressmen must stand high in the estimation of every master-printer. This character is easily acquired by well-disposed men; yet it is to be lamented, that few endeavour to merit an appellation so desirable. We shall now lay down a few directions, which, if properly attended to, will, we are persuaded, enable the pressman to do credit to himself, and justice to his employer, as well as to uphold and preserve that superiority which now so eminently distinguishes the British press.

Of putting up a Press.

An understanding pressman should know not only how to direct a printer's joiner to set up and fasten a press when it is made, but also how to give a strange joiner and smith instructions to make a press, perfect in all its parts, and in a symmetrical proportion, to any size.

This knowledge every pressman should be anxious to obtain, as he would then be able to detect and mend those accidents and defects which frequently happen in the common press ; we therefore recommend particularly to his attention, the foregoing description of the parts of the common press, which will give him a thorough knowledge of its principles and operation.

The joiner having set together the frame, viz. the cheeks, feet, cap, head, till, winter, hind-posts, ribs, carriage, &c. the pressman directs, and sees him perform as follows :

Before the head is put into its place, the pressman rubs the whole tenoned ends and tenons well with soap or grease, and also the mortises the head slides in, and so much of the cheeks as the ends of the head work against, that it may the easier work up and down.

The feet must be placed upon an horizontal level floor, and the cheeks perpendicularly upright, the stays or braces placed so as the press may be kept in the most steady and stable position, as well as to give a check to the force of the hardest pull and most violent blow the bar may give by rebounding against the farther cheek, if by chance it slip out of the pressman's hand. This consideration may direct him to place one brace against the end of the cap that hangs over the near cheek, and in a range parallel with the fore and hind side of the cap : for the more a brace stands aslope to the two parallel sides, the less it resists a force offered to the end of them, viz. the near end of the cap, which is one main stay to the whole press. If he places another brace against the hinder corner of the farther end of the cap, it will resist the spring of the bar, when it may slip out of the pressman's hand ; and placing two other braces, one against the near corner of the hind side of the cap,

and the other against the farther corner of the fore side of the cap, the press will be sufficiently braced up, if the room will afford convenience to place the farther end of the braces against it.

By convenience, is meant a firm solidity to place the end of the braces against, be it either a stone wall, brick wall, or some principal post, or a girder, &c. that will not start or tremble at the force of a pull. The braces ought to be straight, and of substance strong enough proportionable to their length; and, if possible, to be fixed in such a position that they may stand in the same straight line with the upper surface of the cap, viz. that the farther end of the brace neither falls lower or rises higher than the upper side of the cap. Neither ought the brace, though thus placed, to stand aslope or askew, that is, make unequal angles with the side of the cap it is fastened to, but it ought to stand square, and make right angles with the respective sides of the cap; because in those positions the braces best resist the force of continued pulls.

But though this be, by the rules of architecture, the strongest, firmest, and most concise method for bracing up a press, yet the room the press is to stand in will not always admit of conveniences to place the braces thus; therefore the pressman ought to consider the shape of the room, both for the places to fit the braces to, and the positions to set the braces in; placing his braces as correspondent as he can to these rules.

The press being thus far fastened, the carriage is laid on; and if the joiner performs his part well in making the wood work, it will first lie exactly horizontal; if not, it must be altered where it is amiss, before the pressman can lay the stone, and before the stay of the carriage can be fitted under the end of the ribs.

Laying or bedding the Stone.

The carriage being laid on the winter exactly flat and horizontal, and the coffin placed on the ribs, the pressman then lays the stone. Some bed the stone with bran, others with plaster of Paris, but, from long experience, we have no hesitation in saying that brown paper answers the purpose much better ; and such a quantity of it should be laid in the coffin, as will raise the stone a double pica above the surface of the coffin, which will be reduced by the first pull to a pica, and in a short time will leave the projection about a brevier, which it ought always to preserve.

When a stone is laid on brown paper, bran, or on plaster of Paris, the pressmen sling the stone in two strong cords ; then bring it as nearly as they can into an horizontal position, and with great care and caution let it down in such a manner into the coffin, as that the whole bottom of the stone touch the bedding at once ; lest by an uneven lowering of the stone the bedding be disturbed. Having laid the stone down, they drop a small quantity of water about the middle of the face of it, to try whether it lie truly horizontal, which they know by the standing of the water ; but if it have a propensity to one side more than another, the declivity is on that side, and the stone must be re-laid.

Setting the Rounce.

This, when properly done, saves labour and facilitates the work. The girths should be nailed on the barrel of

the rounce : when the press is run out, the near girth will be half a turn round the barrel ; the off girt will be about three turns round it. Every press should have screws for the purpose of fastening the girths, one fixed on the coffin plank behind, and another at the head of the coffin ; these are screwed and unscrewed with ease, which enables the pressman to fix the rounce in its proper position with very little trouble. Nailing the girths on the plank and coffin injures both, and frequently give way, occasioning much trouble and loss of time. The rounce should be set in such a position, that the fore-end of the tympan will just lie down and rise free, without touching the fore-edge of the plattin.

Hanging the Plattin.

A heavy form is laid on the press, with two broad-cloth blankets and two sheets of paper on it ; or, which will answer the same purpose, a quire of demy paper : it is then run in, and the plattin placed on the head of the coffin, hanging down, in order to let the point of the spindle clear the top of the pan, to allow it to fall into the plug destined to receive it. The plattin should lay on the form, in the centre of the press, parallel with the fore-sides of the cheeks, which should be adjusted with a great degree of nicety. The pressman then pulls the spindle hard down upon the plattin, and sets the edges of a paper-board between the bar and the further cheek of the press, to keep the bar from starting back, or secures it by fastening it well with a rope to the near cheek.

Having provided cord, he makes a noose at one end, and puts it over one of the hooks of the plattin, lashing

the cord also upon the hose hook, immediately opposite, and again upon the plattin hook with as much force as possible, and so on till there remains about two feet of the cord ; then he begins to wind round these lashings to draw them close together, and then fastens them with two or three hard knots. In the same manner, and at the same time, another person should tie up the opposite diagonal corner of the plattin, using equal strength in order to prevent any corner from rising up or hanging down.

Justifying the Head.

Justifying or scaleboarding the head is to put into the mortises in the cheeks between the upper sides of the tenons of the head, and the upper sides of the mortises in the cheeks, an equal quantity as to thickness of scaleboards, that when the pressman pulls, the tenons of the head shall have an equal horizontal level cheek.

In justifying the head, the pull is to be made long or short, which is done by putting in or taking out the scaleboard. A heavy form will require the whole strength of the pressman in order to bring off a clear and perfect impression. The height of the bar is generally made to lie at the command of a reasonably tall or short man.

A long or a soaking pull, is when the form feels the force of the spindle by degrees, till the bar comes almost to the near check of the press ; and this is also called a soft pull, because it comes down in a soft, soaking, and easy manner ; and on the contrary the short pull is called a hard pull, because it is suddenly performed.

The pull should be gradual and elastic, which is accomplished by always bringing the bar of a new press, for the first three months, down to the near cheek; and no press can be considered as properly worked down, unless this plan be followed. During the time the press is working down, the head and winter will require an additional scaleboard now and then, which will be ascertained by observing whether the pull produces an adequate impression. The head should never be screwed up tighter than can be accomplished with the finger and thumb, in order to preserve in the scaleboard a proper elasticity.

When the pressman justifies the head, he unscrews the nuts of the head screws, or long bolts, that the weight of the head may draw it down, to make room for the justifiers of the mortises in the cheeks; and when he has put in as many as he thinks necessary, he screws up the head again. He then lays down the tympan on the form, and runs in the carriage under the plattin, and pulls upon it, while his companion screws up the head, as before observed, with his finger and thumb.

The ribs, the tympan joints, the frisket joints, the garters, both ends of the rounce spindle, the nut and spindle, and the toe of the spindle, are all to be well oiled, that they may perform their several offices the easier and lighter, both over and under hand.

Making ready a Form.

A careful pressman will take care, before he lays a form on the press, to wipe the press stone perfectly

clean ; for if any (though small) hard particle be on it, the letter that lies on that matter will, with pulling, quickly rise, and not only make a stronger impression than the rest of the form, but in all probability cause a dent in the plattin, and bear off the adjacent letters. He also carefully examines whether the backside of the form be clean, before he attends to the register, or otherwise make ready his form. The form should be laid under the centre of the plattin.

He then lays the tympan down upon the form, and places the blankets, which he rubs to soften them in it ; (but we will here just observe, that Welch flannel makes the cheapest and best blankets, as it brings off a sharper impression than cloth, and never gets stiff or hard, from the elasticity in the nap) ; then putting in the inner tympan, he fastens it with the hooks and button for that purpose, which serve to keep it from springing upwards. He then folds a sheet of the paper he is about to work, in quarto, and lays the long crease of it upon the middle of the long cross, and the short crease over the middle of the grooves of the short cross, if it lie in the middle of the form ; for in twelves it does not, and then he folds the paper accordingly. Now, wetting his tympan, which is done for close, heavy works, but not for very light, open works, he turns it down upon the paper, and running in the carriage, pulls that sheet, which, with the wet tympan and the force of the pull causes it to stick ; and turning up the tympan again, he examines if the sheet be laid even ; if it has not been laid even on the form, it is better to re-lay it, and pull it again ; for it is of considerable importance that it should be put on perfectly even. This sheet is called the tympan sheet, and is placed there as a standing mark to lay all the

other sheets exactly even upon, while he works the white paper.

Having laid on the tympan sheet, he chooses his points; for large paper short-shanked points, and for small paper long-shanked points, and others in proportion to the intermediate sizes of paper; for his points ought to be so placed, that they may prick the point holes within the grasp of the hollow between his right hand thumb, and fore-finger; because, when he works the reiteration, he may the better manage and point the sheet when laying it on the tympan.

Nor will he place his points too near the edge of the paper; because, in working the reiteration, he would be forced to carry his furthestmost point hole the further from him, which in a long number is a loss of time; and the laying sheets quickly on their point holes adds much to dispatch. Also the less distance there is between the off and near point hole the better, as it saves time; because he must draw his body so much the farther back, to place that hole on its point; he therefore places the near point farther into the paper than the further point, if it be folio, quarto, or octavo; but to twelves, equally distant from both edges of the paper.

By placing the points unequally from the edges of the paper, as in folios, quartos, and octavos, as aforesaid, he also secures himself the more from a turned heap when he works the reiteration; because, without very much altering the quoins, he will not be able to make register; and pressmen, especially if they work upon the same sort of work, seldom or never remove the quoins on the further side of the carriage, nor on the right hand end of the carriage, but let them lie as gauges for the next form; for thrusting the chase close against these quoins, the

register is almost, if not quite, made; the compositor having before chosen chases exactly of an equal size, and made equal whites between the crosses, &c.

Having chosen his points, he places them so that they may both stand in a straight line, parallel with the top and bottom sides of the tympan. He then lays the tympan down upon the form, holding the frisket-end of it in his left-hand, about an inch or an inch and a half above the face of the letter, and sinks his body downwards till he can see between the form and tympan; and with the ball of the middle finger of his right hand presses gently upon the tympan over the point-ends of each point successively, to see if he points fall in or near the middle of the grooves in the short-cross. If they fall exactly in the middle of those grooves, the form lies exactly between the middle of both the ends; if they fall not exactly in the middle, he moves the form between the ends of the carriage till they do, and then quoins up both ends of the chase.

Under this phrase, of making ready the form, are comprehended many other operations; for, 1. the frisket must be covered with brown or stiff paper, by means of paste, and cut; to perform which the pressman fits the match joints of the frisket into the match joints of the tympan, and pins them in with the frisket pins; and having beaten the form, turns down the frisket and tympan on the form, and pulls on the covered frisket. Then he runs out the carriage, takes up the tympan and frisket together off the form, and lays them on the gal-lows; then draws the frisket pins out again, and takes off the frisket, and laying it flat on his bank, with the point of a sharp knife cuts through the frisket about all the sides of each page, allowing to each he thus

~~cuts~~ out of the frisket about a nonpareil margin on all the sides of the cut pages ; then he pins his frisket again on the tympan, as before.

2. He then sees that the form be properly locked up.

3. That no letters or spaces lie in the white lines of the form ; which may happen if the compositor have made any corrections since the form was laid on the press.

4. If any wood cuts be in the form, that they be exactly letter high ; if not, for it seldom happens that they are, he must make them so. If they are too low, he underlays them ; but examines first how much they are too low, by laying one or more cards or scaleboards upon the face of the woodcut, and feeling with the fingers of his right hand if the intended underlay be exactly even with the face of the letter. If it be not, he tries thicker or thinner underlays till he has made it on a level.

Having evened his underlay, he unlocks the quarter it is in, takes the wood cut out of the form, and fitting a scaleboard or card, or what he judges requisite, to the bottom of it, places it thus raised in the form. But yet he trusts not to his judgment altogether for the thickness of the underlay ; but locking up the form again, pulls a waste sheet upon it to sink it as low as it will go, and then observes if it be a proper height ; thus adding or taking away till it produces a clear and perfect impression. If the wood cut be too high, it must be planed lower at the bottom ; or he may introduce a few sheets of paper in the tympan, and cut away the part that bears on the wood cut, until he gets it even.

5. If a white page or pages happen in a form, and he uses a new made frisket, he does not cut out that page ; but if he works with an old frisket, and that page is

already cut out, he pastes on a piece of paper to cover the white page in the form, that it may not black. Those pages adjacent to a white page, will come off harder than any other in the form ; to prevent which, the pressman fits a bearer on the frisket. Bearers are generally made of reglets, which, when laid on the form, will be about a thin lead higher than the letter. They are cut about an inch long, and then pasted and laid on the furniture of the form, with the pasted side upwards ; the frisket and tympan are then laid down upon the form, and an impression made, which will cause the bearer to stick on the frisket. Cork bearers are frequently used, which, from their elasticity, in many cases are very useful.

6. He examines whether the frisket bites ; that is, whether it keep off the impression from any part of the pages ; if it does, he cuts away so much, and about a nonpareil more, off the frisket where this happens.

7. He examines if the beards of the letter print at the feet of the pages ; if they do, he considers whether the too short or too far running in of the carriage causes it ; or whether it be only the beard of a short page that comes off ; if the last be the cause of it, he remedies it by a bearer.

8. If the carriage be run in too short, and the feet of the pages stand towards the plattin, the hind-side of the plattin will press strong upon the feet of those pages ; and if the carriage be run in too far, the feet of the pages that stand towards the hinder rail of the tympan will most feel the force of the plattin ; and according to a greater or less proportion of that force, and to the softness or yielding of the paper, tympan, and blankets, and all other springs in the press, the feet of the pages and beard of the letter will more or less print hard. In this case he runs the carriage under the plattin, till the further edge of

the plattin just covers the feet of those pages, and with a piece of chalk makes a stroke over the plank of the near side of the carriage behind, and the upper side of the rail of the ribs ; then he runs in the carriage again, till the foreside of the plattin just covers the feet of the pages next the hind rail of the tympan, and makes another mark with chalk on the rail of the ribs, to join with the mark he first made on the plank of the carriage. He now runs out the carriage, and lays the tympan down on the form ; then runs in the carriage again till he joins the mark or line he made first on the plank and rail of the ribs, and makes a mark with chalk on the further rail of the tympan to range with the fore-side of the plattin. This mark on the tympan shews him how far he must run the carriage in against the fore-edge of the plattin, for the first pull. Then he runs in the carriage farther, till he joins the same mark or line on the plank to the second mark he made on the rail of the ribs, and makes another on the further rail of the tympan to range with the fore-side of the plattin, for the mark to which he is to run the carriage in against the fore-edge of the plattin, for his second pull.

9. He examines if the catch of the bar will hold it when the spindle makes a small spring, viz. when the bar flies but a little way back from the pressure of the form ; if it will not, he knocks up the catch higher, and then screws the screw on the shank, and consequently the catch close and firm against the cheek of the press. But if the catch stand too high, so that it will not without a great spring (viz. when the bar is pulled hard from the further cheek) fly up ; he then knocks upon the top of it, to sink it lower ; and, when it is well fitted, screws it up again as before. If the catch stand too low, it will not hold the bar, but will come down when he is at work ;

for if, as it often happens, he lets the bar fly back harder than ordinary, or if it slip out of his hand, it will knock hard against the cheek, and spring back again. If the catch of the bar stand but a little too high, the violence of the bar's flying back to make it stick on the catch, will soon loosen the square of the bar in the eye of the spindle ; and indeed subject the whole press to an unstable condition.

10. He considers whether the catch of the frisket stands either too forward or too backward. It may stand too forward, though when it is leisurely turned up it stays the frisket ; because, when the pressman is proceeding in his work, though he generally throws the frisket quick up with an accustomed, and, as he intends, equal strength ; yet if his guess at strength in throwing it up varies, and it comes, though but a little harder up, the catch will make the frisket return ; and though, as it sometimes happens, a solid wall serves to do the office of a stay for the frisket, yet with a little too hard throwing it up, the frisket itself will so shake and tremble from end to end, that before it recovers rest, its own motion will, by the quick running of a spring, throw it back again. If the catch stand too backward, then, after he has given the frisket a touch to bring it down, it will be too long before it come down, and retard the progress of the work, and not unfrequently cause the sheet to slip out of its proper place ; he therefore places the catch so that the frisket may stand a little beyond a perpendicular backwards, that with a near-guessed strength in the tossing it up it may just stand, and not come back ; for then with a small touch behind, it will again quickly come down upon the tympan.

11. He fits the gallows, so that the tympan may stand as much towards an upright as he can ; because it

is the sooner let down upon the form and lifted up again. But yet he will not place it so upright, as to prevent the white sheets of paper from laying secure on the tympan ; and for reiteration sheets, their lying upon the points secures them.

12. He considers the situation of the foot-step, and he places it so as may best suit with his own stature ; for a tall man may allow the foot-step to stand farther off and lower than a short one, because his legs reach farther under the carriage, and he can tread hard to add strength to his pull ; when a short man must strain his legs to feel the foot-step, and consequently diminish the force of his pull.

13. Few pressmen will set the range of the paper bank to stand at right angles with the plank of the carriage ; but they draw the further end of the paper bank so as that the near side may make an angle of about seventy-five degrees, more or less, with the near side of the carriage. The reason is, if the near side of the paper bank stand at right angles with the near side of the carriage, he must carry his hand farther when he lays or casts sheets, which would occasion delay : besides, his companion has a nearer access to it, to look over the heap, which he frequently does, to see the colour of the work.

14. The pressman brings his heap, and sets it on the horse, on the near end of the paper bank, as near the tympan as he can, yet not to touch it, and places an end of the heap towards him. He then takes the uppermost or outside sheet, and lays it on the bank ; and taking three, or four, or five quires off his heap, he shakes them at each end, to loosen the sheets, that with pressing stick close together ; and not finding them loose enough, he shakes them long-ways and side-ways,

to and fro, till he finds he has sufficiently loosened or hollowed the heap. Then with the nail of his right hand thumb, he draws or slides forward the upper sheet, and two or three more commonly follow gradually with it, over the hither edge of the heap, to prepare those sheets ready for laying on the tympan.

Rubbing out Ink.

Before the pressman goes to work, he rubs out his ink. If it has lain long on the ink-block, since it was last rubbed out, the surface of it is generally dried and hardened into a film or skin, for which reason he carefully takes this film quite off, before he disturbs the body of the ink; for should any, though ever so little of it, mingle with the ink, when the ball happens to take up the little particles of film, and delivers them again upon the face of the letter, they produce picks, print black, and deface the work; and if they get between the face of two or more letters, or the hollows of them, they will obliterate all they cover; and if they be pulled upon, and the pressman not careful to overlook his work, they may run through the whole heap. Having carefully skinned off the film, he brings forward a small quantity of ink near the edge of the block, which he rubs well with the brayer. Care should be observed not to brayer out much at a time; for if this be done, it will be impossible to preserve any degree of uniformity in taking ink.

Of Beating.

Beating is an important part of a pressman's business, which, if not properly done, renders every other operation almost useless. A careful beater will never be found to take much ink at one time ; but keep brayered out in the front of the ink-block a small quantity, that he might be certain of never receiving more than is necessary. The great art in beating is to preserve a uniformity of colour, which is easily performed by paying a proper attention to the taking of ink ; this done regularly, and the form beat well over, the beater may be said to have done his duty.

All pressmen do not beat alike, but the method generally followed by good workmen is, the moment the tympan is lifted up, to lay the balls on the left hand near corner of the form, that he may the more readily carry them to the near right hand corner, while his companion is casting the sheet on the bank ; if this opportunity be lost, it occasions delay, and in all probability leaves that corner untouched by the ball, and makes what is technically termed *a friar*.

In beating over the form, the elbows should be kept rather inward, and the ball stock handle inclining outward, in order that the balls may be perfectly upright ; it will also enable him to go over the corner before mentioned with greater ease and certainty. This plan, if strictly followed, is unquestionably the most expeditious, as well as the least liable to defects, if common attention be observed by the beater. He begins, as already observed, at the right hand near corner, and goes up that side of the form and returns, and leaves off at the left

hand near corner, taking care to make the form feel the force of the balls by beating hard and close. In the operation of beating the balls should be constantly turning round in the hands, as it keeps them in their proper shape, and thereby renders them more safe and pleasant to work with.

The balls should not go too far over the form, for they are liable to gather dust, and consequently throw picks on the form, which are not easily got rid of. These picks, and every other defect, it is the business of the beater to look carefully after, and to endeavour to mend and prevent. His companion can also, when taking off the sheets, give a slight glance over them; but the uniformity of the work will depend principally upon the beater. He will point out to the puller any defects in laying on the sheets on the tympan, or if he neglects to pull down the work with the force it requires.

Having thus gone twice upwards and downwards with the balls, beating close and strong, the form may then be considered sufficiently beaten; but if he beats the first sheet of a fresh form, or after a form has been lately washed and consequently damp, or makes a proof, he goes three, four, or five times upwards and downwards, for the letter will not take the ink without several beatings.

Of Pulling.

The puller lays on sheets, lays down the frisket and tympan, runs in and out the carriage, takes up the tympan and frisket, takes off the sheet, and lays it on the heap. All these operations are in general mingled and lost in the name of pulling; and as in pulling, so in

beating ; for though the beater brayers out the ink, distributes it on the balls, peruses the heap, &c. yet these operations are also lost in the general name of beating.

To take a sheet off the heap, he places his body almost straight before the near side of the tympan ; but he nimbly twists the upper part of his body a little backwards towards the heap, the better to see that he takes but one sheet off, which he loosens from the rest of the heap by drawing the back of the nail of his right thumb nimbly over the bottom part of the heap (but in the reiteration care should be observed to draw the thumb on the margin, or between the gutters, that the sheet may not smear or set off) and receiving the near end of the sheet with his left hand fingers and thumb, catches it with his right hand about two inches within the further edge of the sheet, near the upper corner, and about the length of his thumb below the near edge of the sheet, and brings it nimbly to the tympan, and at the same time twists his body again before the tympan, only moving his right foot a little from its first station forwards under the coffin plank ; and as the sheet is coming to the tympan, (suppose it to be white paper) he nimbly disposes the fingers of his right hand under the further edge of the sheet near the upper corner ; and having the sheet thus in both his hands, lays the further side and two extreme corners of the sheet down even upon the further side and extreme further corners of the tympan sheet ; but he is careful that the upper corner of the sheet be first laid even upon the upper corner of the tympan sheet, that he may the sooner disengage his right hand. If, however, by a quick glance of his eye, he perceives the sides of the sheet lie uneven on the tympan sheet, with his left hand at the bottom corner of the sheet, he either draws it backwards, or pulls it forwards, as the sheet may lie higher or

lower on the near corners of the tympan sheet, while his right hand, being disengaged, is removed to the back of the ear of the frisket, and with it gives it a light touch to bring it down upon the tympan, laying, at the same moment the tympan on the form. He then, with his left hand, grasps the rounce, and with a moderate strength nimbly gives its winch about one turn round; but to regulate his running in, he first makes a mark, as before observed, on the further rail of the tympan, to which mark he runs the carriage in, till he brings the mark in a range with the fore edge of the plattin; and as it is running in, skips his hand to within an inch or two of the end of the bar, and then gently leans his body back, that his arm, as he pulls the bar towards him, may keep a straight posture; because in a pull it has then the greatest strength. He now puts his right foot upon the footstep, while his left hand holds fast by the rounce; as well to rest on the footstep and rounce, as to enable him to make a stronger pull; which will prove longer or shorter according to the strength put to it. Then disengaging his right hand again from the handle of the bar, he slips it to the bow of the bar, before the handle rebounds quite back to the cheek of the press; for should the bar by its forcible spring knock hard against the cheek of the press, it might not only shake some of its parts out of order, but subject the whole machine to injury; besides, the further the bar flies back, the more he is retarded in recovering it again. But yet he must let the bar fly so far back, as that the plattin may clear the tympan; lest, when he runs in for his second pull, the face of the plattin rub upon the tympan, and force the sheet upon the face of the letter, which slurs or doubles it, and destroys the sheet.

Having made the first pull, and the rounce still in his left hand, he turns it round again, till the carriage runs in

so far as that the second mark of the rail of the tympan comes in a range with the further edge of the plattin, as before, and then pulls his second pull, as he did his first, and slips his right hand again off the handle of the bar to the bow, guides the bar expeditiously to its catch; and just as he has pulled his second pull, he gives a quick and strong pressure upon the rounce, to turn it back, and run the carriage out again; and as soon as he has given this pressure, he disengages his left hand from the rounce, and claps the fingers of it towards the bottom of the tympan, to assist the right hand in lifting it up, and also to be ready to catch the bottom of the sheet when the frisket rises, and conveys it quick and gently to the catch; and while the frisket is going up, he slips the thumb of his left hand under the near lower corner of the sheet, which, with the assistance of his two fore fingers, he rises, and by so doing allows the right hand also to grasp it at the top, in the same manner, which lifts the sheet carefully and expeditiously off the points, and nimbly twisting about his body towards the paper bank, carries the sheet over the heap of white paper to the bank, and lays it down upon a waste sheet or wrapper, put there for that purpose; but while it is coming over the white paper heap, though he has the sheet between both his fore fingers and thumbs, yet he holds it so loosely, that it may move between them as on two centres, as his body twists about from the side of the tympan towards the side of the paper bank.

Thus, both the pressman's hands at the same time are alternately engaged in different operations; for while his right hand is employed in one action, his left is busy about another; and these exercises are so suddenly varied, that they seem to slide into one another's position, beginning when the former is but half performed.

Having thus pulled a sheet, and laid it down, he turns his body towards the tympan again ; and, as he is turning, gives the next sheet on the white paper heap a touch with the back of the nail of his right thumb, as before, to draw it a little over the hither edge of the heap, and lays it on the tympan, &c. as he did the first ; and so successively every sheet, till the whole heap of white paper be worked off.

As he comes to a token sheet, he undoubles it, and smooths out the crease with the back of the nails of his right hand, that the face of the letter may print upon smooth paper. And being printed off, he folds it again, as before, for a token sheet when he works the reiteration.

Having worked off the white paper of twelves, or any form imposed like twelves, he places his right hand under the heap, and his left hand supporting the end near him, turns it over on the horse, with the printed side downwards : if octavo, or similar works, he places his left hand under the heap, and also supports the outside near end with his right hand, and turns it over, viz. one end over the other. In performing this, he takes from the worked off heap so much at once between both his hands as he can well govern, without disordering the evenness of the sides of the heap, viz. a token or more, and lays that upon the horse ; then takes another lift, and so successively, till he has turned the whole heap.

Having turned the heap, he proceeds to make register, which he does by laying one of the sheets just printed, on one side, upon the tympan sheet, for a register sheet, and a waste sheet over that to keep it clean from any filth the face of the letter may have imprinted upon it, and pulls these two sheets. Then he runs out the carriage, lifts up the tympan, and takes off the two sheets, laying the

waste sheet by ; but turns the other side of the register sheet, to try how the impression of the sides of all the pages agrees, and lies upon the impression in the first pulled side. If he finds they agree perfectly well, register is made. But if the impression of the last pulled side of the register sheet stand not even with the impression of the first pulled side, either the whole length of the sheet or part, he observes how much it stands uneven ; then he loosens the quoin or quoins on the farther side of the coffin, and removes them backwards till they stand the proper distance off the sides of their respective corners ; then knocks up one or both the opposite quoins, till he have removed the chase, and in consequence has forced the opened quoin or quoins close against their corners. Or if the impression of the last pulled side stand within the impression of the first pulled side, he observes how much also, and loosening the hither quoin or quoins, and knocking up the opposite as before, makes register for the sides of the sheet.

He next observes how the register of the head and foot agree ; and if he find they agree on both sides the short cross, he has good register, supposing the compositor has performed his office, by making all his pages of an equal length, &c.

If the impression of the last pulled sheet lie without the impression of the first pulled sheet, towards the upper or lower end of the tympan, he opens the quoins at the respective end, and knocks up the opposite till he has made register ; to try which, he pulls another clean register sheet as before, and if he find register agree on all sides of the form, the task is performed ; if not, he alters it till it does.

But it sometimes happens that the compositor has not made the white exactly equal between all the sides of the

crosses ; in this case, altering the quoins will not make good register ; the pressman therefore observes which side has too much or too little white, and, unlocking the form, takes out or puts in such a number of scaleboards as he thinks will make good register, which he tries by pulling a sheet, and if it be necessary, alters it again, till he has pulled a sheet with good register.

Having made register, he proceeds to work it off ; but he somewhat varies his posture in laying on the sheet ; for, as before, when he worked white paper, he caught the sheet by the upper further corner with his right hand, he now, having taken up the sheet, catches it as near the further side of the further point hole as he can, with the ball of his right hand thumb above the sheet, and the ball of his fore finger under the sheet, the readier to lay the point hole over its respective point ; which having done, he slips his body a little backwards, and both his hands with it, his right hand towards the near point hole, with the back of the nails of his fingers to draw or stroke it over the point ; and the fingers of his left hand, as they come from the further corner, nimbly slipping along the bottom edge of the sheet, till they come to the hither corner ; and then with his fore finger and thumb lays hold of it, in order to guide the point hole on that point also ; then pulls that sheet, as before, as he did the white paper, and so successively all the rest of the reiteration. The token sheets, as he meets with them, he does not fold down again, as he did the white paper.

Covering the Tympan.

The tympan are covered with vellum, forrels, or parchment. The skins should be of an equal thickness, and

about two inches and a half wider, and three inches longer than the tympan.

Tympan has been sometimes covered with Irish cloth, which, on account of its evenness, would answer the purpose ; but it is so apt to stretch, that the tympan becomes slack in a short time, and bag (as it is termed), which occasions a slur on the work.

Having provided some stiff paste, he lays so much of it on the edges of the skin, as will cover the tympan, which is also well pasted. He then lays the skin on the tympan, and draws it regularly, as tight as possible, on all sides. That part of the skin that comes on the grooves of the tympan which receive the point-screws, is cut and wrapt round the inside edge of the groove, which admit a free passage for the screws. After having fastened the skin on the sides of the tympan, he draws it towards the joints which receive the frisket, and with a knife cuts across these joints to let them through the skin ; he then puts the frisket pins through the same, and makes that end of the tympan fast. He next proceeds to the lower joints, and brings the skin as tight as he can round that part of the tympan. The point-screws and ducks-bill are then put on, which prevent the skin from starting.

The inner tympan is covered in the same manner, and in order to prevent its warping, a stick or a piece of furniture is placed in the centre of it, till it be perfectly dry.

The skins are put on either wet or dry ; if dry, they should be afterward well wet, which makes them give for the moment ; they are then drawn as tight as possible. As they dry, they contract, and are by this means rendered much tighter than they would be if put on wet.

Of Wetting Paper.

Paper is commonly wet in a trough full of clean water. The pressman places the dry heap on the left hand of the trough, and a paper-board with its breadth before him on his right, laying first a wrapper or a waste sheet of paper on the paper-board, that it may not soil the first sheet of the heap. Then he takes up the first token, and lays it with the backs of the quires towards his right hand, that he may the readier catch at the back of each quire with that hand; he lays that token across the rest of the heap, that he may the easier know when he comes to the end of it.

He takes a quire by the centre of the back in his right hand, and the edge of it in his left, and lays it down upon the waste sheet, opens it, and lays on it a few sheets.

Having laid down his dry laying, he takes the remainder of the quire off the dry heap, with the back of it in his right hand, and the edge of it in his left, as before, and closing his hand a little, that the quire may bend rather downwards between his hands, he dips the back of the quire into the left hand side of the trough; and discharging his left hand of the quire, draws it through the water with his right; but as the quire comes out, he quickly catches the edge of it again in his left hand, and brings it to the heap; and by lifting up his left hand, bears the under side of the quire off the dry paper, laid down before, lest the dry sheet should stick to the wet before he has placed the quire in an even position, and so perhaps wrinkle a sheet or two, or else put a dry sheet or two out of their even position. But this drawing the quire through the water, he performs

either quick or slow ; if the paper be weak and spongy, he performs it quickly ; if strong and stubborn, slowly. To place this quire in an even position, he lays the back of it exactly upon the open crease of the former, and then lets the side of the quire in his left hand fall flat down upon the heap ; and discharging his right hand, brings it to the edge of the quire ; and with the assistance of his left thumb, still in its first position, opens or divides either a third or half of the whole quire according to the quality of the paper ; and spreading the fingers of his right hand as much as he can through the length of the quire, turns over his opened division of it upon his right hand side of the heap.

Having wet his first token, he doubles down a corner of the upper sheet of it on his right hand, so that the further corner may lie a little towards the left hand of the crease in the middle of the heap, and that the other corner may hang out on the near side of the heap, about an inch and a half ; this sheet is called the token sheet, as being a mark for the pressman, when he is at work, to know how many tokens of that heap are worked off.

Having wet the whole heap, he lays a wrapper or waste sheet of paper upon it, that the paper-board may not soil the last sheet of the heap ; then, three or four times takes up as much water as he can in the hollow of his hand, and throws it over the waste sheet, that it may moisten and soak downwards into the unwet part of the last division of the quire.

The paper being thus wet, he takes up the whole heap upon the paper-board, and sets it by in a part of the room, appropriated for that purpose, and lays another board upon it ; and upon the middle of the board sets about half a hundred weight, and lets it stand by to press, commonly till next

morning ; for pressmen generally wet their paper after they have left work at night. All paper would be better if it were separated and turned in the course of the next morning, if it has been wet over night, and pressed again for seven or eight hours.

Knocking up Balls.

Pelts are used for this purpose, and such are chosen as have a strong grain, and the grease well worked out of them. They are purchased either wet or dry ; if dry, they are put to soak in chamber-lie. One skin generally makes two proper sized balls. When the skin has soaked sufficiently, which will require about fourteen or fifteen hours, it is taken out of the lie, and *curried* ; that is, by putting the skin round the currying iron, or any upright post, and taking hold of each end of it, and drawing it with as much force as possible, backwards and forwards, against the post, which discharges a good deal of the water and lime, and renders it more pliable ; he then cuts the skin exactly in two, and puts them under his feet, and continues to tread them till he is unable to discover the smallest particle of water, or till it sticks to the foot in treading. The skin is then laid on a wetting board, or a vacant press stone, and stretched, by rubbing the ball stock on it, as much as possible. He then places a lining, (which is a worn-out skin, and which has been previously soaked, but not trodden), on the skin, and nails them with one nail to the ball stock ; he then proceeds to lay the different cardings of the wool one upon the other, crossways, till he has sufficient for the ball ; he then takes it up by the bottom corners, and grasps it into a circular form, with which he fills the

ball stock, then brings the skin opposite the part already nailed, and makes that also fast with another nail. He then puts two nails immediately opposite each other between the fastenings already made, and proceeds to put the skin in plaits, about an inch wide; through each plait a nail is driven; the superfluous skin should then be cut off, within half an inch of the nails. Balls are well knocked up when the wool is so placed, as to form a full even face, that every part of the skin may bear upon the letter; not rising in hillocks, or falling into dales; not having too much wool in them, for that will render them soon hard and uneasy for the pressman to work with; or too little, for that will make the skin, as the wool settles with working, soon flap, and wrap over into wrinkles, so that he cannot so well distribute the ink on his balls.

Having knocked up the balls, he dips them into the chamber-lie, and immediately scrapes them with the ball knife, in order to make them perfectly clean; he then procures a clean sheet of stout paper, and puts it on the ball, and continues rubbing and patting it till the ball is perfectly dry, which is considered in that state when it will readily take the ink on every part of it. Having thus dried the balls, he proceeds to take ink; but if he finds that scarcely any of the skin is black, they are not sufficiently dry; he then returns again to drying it with paper, or burns a piece of waste paper, and waves his ball to and fro over the flame of it, but so quick and cautiously that he neither scorches the leather nor dries it too much; in winter time, when a fire is at hand, he dries it gently by the fire.

If the balls are greasy, they should be frequently rubbed up with the pelt blankets, and well scraped; and dried, as before, with paper.

Printing Red, or other Colours, with Black.

When red and black are to be printed on the same sheet, as in Moore's, and other almanacks, the form is made ready in the usual way, and a line traced all round the outside of the chace on the stone with chalk, or any thing that will accurately shew the exact situation in which the form must be placed after it has been taken off the press. The pressman then pulls a sheet in order to get those words or lines marked, which are to be worked red; while this is doing, he washes the form thoroughly, as the least dirt remaining on it, will destroy the beauty of the red. The form is then laid with its face downwards, on a letter-board covered with a press blanket. Those words marked to be red are then forced down, (which the soft and spongy nature of the blanket readily admits of), and nonpareil riglets nicely fitted into the vacancies, which raise the red lines and words all of an equal distance from the other matter. A sheet of paper is then pasted on the form, which keeps the nonpareil underlays in their proper places. The form is again laid on the press, observing the utmost care in placing it, agreeable to the marks before made on the stone. It must then be made perfectly fast to the corner irons, as it is highly important that it remain firm and immoveable during its stay on the press. The frisket (which is covered with parchment), is then put on, the form beat over with the red balls, and an impression made on it. The red words are then cut out with a sharp-pointed penknife, with so much nicety as not to admit the smallest soil on the paper from the other matter.

The red being finished, and the form washed, the compositor unlocks it, (which is best done on the imposing stone, as the pressman can easily lay it, agreeable to the marks made on the press), and draws out the red lines, and fills up the space with quadrats. When this is done, the pressman cuts out the frisket for the black.

An extra pair of points are used to prevent the black from falling on the red, which is termed *riding*.

When a very extensive number is to be printed, two forms are generally used, one for the red, and another for the black.

There is another method of placing the underlays, which is adopted for broadsides, &c. with large letter, and with perhaps only two or three lines of red in them. The red lines are taken out on the press stone, and the underlays put in with a bodkin, upon which these lines are placed, and the frisket cut out as before mentioned.

Balls having been once used for black, cannot be employed for any other colour; and as printing with red, &c. is but rarely performed, the balls for that purpose should be made of old parchment, well soaked, which may be done in a few minutes. These balls are made without stocks, and of a small size. For almanacks, broadsides, &c. where a large number is printed, a new pair of balls are made in the usual way.

Mixing and Grinding Colours with Varnish.

Varnish is the common menstruum for all colours used in printing. Red is the colour generally used with black. Vermillion, with a small portion of lake, produces a beautiful red, which should be well ground with a muller on a marble slab, till it be perfectly smooth. If it

be in the smallest degree gritty, it clogs the form, and consequently produces a thick and imperfect impression ; no pains should therefore be spared to render it perfectly smooth ; it may then be made to work as clear and free from picks as black. A cheaper red, but not so brilliant, may be prepared with orange mineral, rose pink, and red lead.

The Prussian blue makes also an excellent colour, and will require a good deal of time and labour to render perfectly smooth. It is also ground with the best varnish, but made considerably thicker by allowing a greater portion of colour with the same quantity of varnish than the red ; it will then work clear and free from pick. As this colour dries rather rapidly, the balls will require to be frequently scraped.

Other colours may be made, viz. lake and russet, which produce a deep red ; verditure and indigo, for blues ; ochre, pink, yellow ochre, for yellows ; verdigrease and green verditure, for green, &c. All these colours should be ground with soft varnish, being in themselves dry, or they will so choke up the form, as to require it to be frequently washed, as well as dry and harden the balls and soon render them useless.

The best colours for printing are those of the lightest body and brightest colour.

Boiling lees, made of American pearl ash, should be used for washing the forms.

Rules and Remedies for Pressmen.

It is the business of the pressman to pull proofs whenever they are wanted. In most offices of any extent, an empty press, called a proof press, is generally placed

some part of the composing room. The slovenly manner in which proofs are too often pulled, cannot be sufficiently reprobated. It is the duty of the corrector to notice whatever appears faulty or defective in the type ; consequently, upon dirty, or almost illegible proofs, the marks will be numerous, and the trouble and loss of time to the compositor great and vexatious. This is not the greatest evil ; the most attentive and careful reader will not, in such proofs, be able to discover faults, which, if he but glance his eye over the sheet at press, will so stare him in the face, as to make him almost involuntarily cry out, with Macbeth—

Thou canst not say that *I* did it !

No proof should be received by the reader, that has not been pulled perfectly clean and legible ; the pressman would then be obliged to take some pains in this respect.

After a proof has been made, the form should be well rubbed over with clean lie.

About every three sheets a small quantity of ink should be taken, and during the intervals the beater is not employed in brayering out or taking ink, he should be overlooking the heap in order to detect any want of uniformity in the colour ; to observe if any letters, quadrats, or furniture rise ; that no letters are drawn out, or battered ; that the register be good, and the work free from picks : during this examination, the balls must be distributed as much as possible.

When, through carelessness, too much ink has been taken, it should be removed by laying a piece of clean waste paper on one of the balls, and distributing them till the ink is reduced to the proper quantity.

If letters, quadrats, or furniture, rise up and black the

paper, they should be put down with the bodkin, and the quarter locked up tighter.

If any letters are battered, the quarter they are in must be unlocked, and perfect ones put in by the compositor.

When bearers become too thin by long working, they should be replaced by thicker ones.

When the form gets out of register, which will often happen by the starting of the quoins, which secure the chase, it must be immediately put in again, as there can scarcely be a greater defect in a book, than a want of uniformity in this particular.

If picks, which are produced by bits of paper, skin, or film of ink and grease, or other filth, get into the form, they are removed with the point of a pin or needle; but if the form is much clogged with them, it should be well rubbed over with clean lie, or taken off and washed: in either case, before the pressman goes on again, it should be made perfectly dry by pulling a waste sheet or two, in order to suck up the water deposited in the cavities of the letter.

The puller should habituate himself to glance his eye over every sheet, as he takes it off the tympan; this may be done without retarding his progress; by following this plan, he will be enabled to detect imperfections which may escape the beater.

In order to ensure uniformity in receiving ink from the block, care should be taken to brayer out at the edge of the block, small quantities at a time. While this is doing, the balls must rest on the ball rack, with the right hand on the upper ball-stock handle.

Torn or stained sheets, met with in the course of work, are thrown out and placed under the bank; but the pressman should be particularly careful to have them

supplied by others from the warehouseman. Creases and wrinkles will frequently happen in the sheets, through careless wetting of the paper; these should be carefully removed, by smoothing them out with the back of the nails of the right hand.

In twelves, and other works where the plattin pinches twice upon the centre pages, *doubling* frequently happens; the following, among many others, are the causes of, and remedies for this evil.

It happens when the face of the plattin and the inner tympan are both dirty, which occasions them to stick; they should always be kept perfectly clean.

Slack or rickety tympan will also cause doubling; and leaning the body against the carriage in reaching the bar, in presses without guide cramps, and in those also where these cramps do not act with truth.

The nut being loose in the head will also occasion this defect; the short bolts should be screwed up as tight as possible.

If the plattin be slack, or otherwise improperly tied up, this defect will always happen; also doubling will happen from the following causes, which must be remedied by the joiner and smith: viz.

When the tenons of the head are so narrow as not to fill the mortises in the cheeks.

The nut and garter so worn as not to admit the spindle to work close in them.

The hose not working easy and steady in the shelves.

The wheel on the spit not well justified, and its having too much play in the ear, which causes an unpleasant check.

The paper being rather too dry, will also sometimes cause the impression to double.

Slurring and mæckling will frequently happen when the tympan are carelessly and suddenly put on the form:

they should always be laid down easy, and the slur screw made use of.

Leaning against the carriage, as before mentioned, will also cause a slur.

If the plattin rub against the rail of the tympan, it will inevitably cause a slur and mackle. This can easily be remedied by moving the tympan so as to clear the plattin.

The ear of the frisket being so long as to cause it to rub against the cheek, always produces a slur; this can be prevented by filing off a part of it.

Loose tympan will at all times slur the work; great care must therefore be observed in drawing them perfectly tight.

Independent of the above causes, slurring and mackling will sometimes happen; it will be better in this case to tie as many cords as possible across the frisket, which will keep the sheet close to the tympan.

Before the pressman leaves his work, he covers his heap. He first turns down a sheet like a token sheet, where he leaves off, then puts a quantity of the worked off sheets on it, taking care to have the printed side upwards, that his companion, if he have any, on coming to work first in the morning, may not be deceived in taking it for the reiteration. Laying the blanket on the heap, after leaving off work, is a bad custom. If the paper be rather dry, it will be better to put wet wrappers on it. The blankets should always be kept as dry as possible, that they may not make the inner tympan damp and slack.

The pressman's next care should be to look after his balls. They should be well rubbed with a blanket soaked with chamber-lie, if they are inclined to be hard, that they may be in proper order for the next day's work.

They must be left well covered up with the blankets ; but if they are already sufficiently soft, they will not require rubbing, and what is termed a dry blanket will answer the purpose, viz. one from which the water does not run. When the balls have been over-soaked, they should be left on the rack all night, with merely a piece of paper round them, as they will not bear the process of what is termed *capping*.

The pressman next observes whether his form be clean ; if so, he puts a sheet of waste paper between the tympan and frisket, and lays them down on the form : if it be dirty, it must be rubbed over with clean lie. On his return to work in the morning, he takes care to wet the tympan, (but not for very light work). If there should happen to be any pages in the form particularly open, those parts of the tympan where they fall must not be wetted.

CHAP. XIV.

*The Business of an Overseer.*

IN most printing-offices, where four or five presses are engaged, a person is generally employed as superintendent or overseer, from whom the journeymen receive their instructions, and to whom they pay respect and deference. It may be in the power of any master to conduct a business to the extent already mentioned, without the aid of an overseer, if he were not subject to repeated interruptions, by applications from his employers ; but the nature of the printing business is such, as to render it indispensably necessary that some person, in the capacity of an overseer, should be *always* on the spot. Compositors and pressmen are at all times dependent on each other ; they therefore demand the constant attention of the overseer, in order that nothing may occur to cause a stoppage or standing still to either party. Having made these preliminary observations, we will proceed to offer

a few hints, and to lay down some rules for the conduct of a person filling the respectable and important situation of an overseer.

He should be the first and last in his attendance to business ; viz. the first in the office in the morning, to see that the journeymen, (if any on established wages), warehouseman, apprentices, and errand boys, are at business at the regular time ; and the last in the office in the evening, to dispatch proofs, messages, &c. by the errand boys, and to lock and secure the doors, closets, fire, and candle. His attention to these points is of great importance, and cannot, in a well-regulated house, be dispensed with ; it must be the business of some one, and to whom can it so properly belong as to the overseer, who professes, and whose province it is, to regulate and keep in order the different persons employed in a printing office ?

After the office has been swept, and he has received the type selected from the dust, by the errand boy, he immediately distributes it in the different cases to which it belongs. He then goes regularly through the composing room, and examines every compositor's frame, in order to discover if any pie be left on it, or on the bulk attached to it. If he discovers any, or even a single letter, he desires the compositor to distribute it. His uniform attention to this particular is of great importance ; for it will be the means of keeping useful and necessary sorts in their proper places, which would be otherwise buried in a mass of pie ; as well as give a neatness of appearance to the office, which is both pleasing and respectable.

He should be well acquainted with the exact state of every work in hand, and use the following, among other methods, to expedite and complete them. 1. In a companionship, never to allow any man to hold too large a

taking of copy, which keeps the other companions composing at random longer than they ought to be, and blocks up and engages a larger quantity of letter than would be necessary, if regularity were observed in this respect, as well as retard the imposition of the sheet, and in all probability keep both pressmen and compositors standing still. 2. To order the imposition of a sheet the moment it is composed and made up, if there be room on the imposing stone for that purpose. 3. When the sheet is imposed, to be equally expeditious in getting it pulled. 4. After it is read, the compositor should, without delay, (if no obstacle occurs), correct it; and when corrected, to be immediately pulled and sent to the author, if required, or given to the reader to be read for press, which, when done, to use the same expedition in getting it finally corrected for press.

By following these methods closely, he will be enabled to keep compositors and pressmen regularly employed; and, if he have to do with steady men, establish and preserve his master's character for dispatch and punctuality.

An overseer should possess a perfect knowledge of every branch of his profession. It sometimes happens that the absence of the reader may lay him under the necessity of reading for press; he should therefore be well qualified for that task; those qualifications, to which we invite his attention, are fully laid down in the next article. He should also possess a firmness of character, not easily intimidated, with urbanity of manners, which will assuredly gain him the esteem and respect of all about him.

Sorts not in common use, furniture, chases, leads, &c. should be under the care and lock of the overseer, that they may be in readiness to give out, when wanted. A memorandum book, in which particular sorts are entered, would be found highly useful.

He should be furnished with a book called the press-book, in which he will regularly, every evening, enter the paper for the different works intended to be given out to wet ; first, the date when given out, then the title of the work, and the number printed. When the pressmen inquire of him what they are to lay on, he informs them, and in this book enters the signature of the sheet, the date when laid on, the number of the press, and the hour ; but in order to convey a more correct idea of what is here described, the following plan is given :

The Press-Book.

When given out to wet.	Names of Works.	No.	Signature.	Date when laid on.	No. of Press.	Hour when laid on.
Nov. 3.	Spectator - - -	35000	E, E 2	Nov. 5, 6	6th, 2d	11 m. $\frac{1}{2}$ p. 9 m.
4.	Holinshed's Chronicles	15000	4R, 4R 2	7, 9	4th, 4th	4, 8 m.

After he has entered into this book the account of the paper intended to be wet, he sets down the same articles with the numbers and date, in a book called the wetting book : from this book the warehouseman receives his instructions for giving out the paper. It frequently happens in works of a large number, that one sheet is laid on by two presses ; when this is done it is entered as the Spectator in the annexed plan ; viz. signature E, the outer form was laid on November 5, by the sixth press, at 11 o'clock in the morning ; the inner form, E 2, was laid on November 6, by the second press, at half past nine in the morning. It may appear, to some, trifling and unnecessary to specify in this book the hour of the day the pressmen lay on a form ; but we would observe, that it is of importance to the overseer, in his arrangements to provide for the presses, to be able to ascertain, by referring to the book, when they are likely to be off.

This book also informs him of the quantity of wet paper, and the length of time it has been wetted ; this is of importance when authors sometimes detain proofs so long, that the paper allotted for those sheets will mildew, if it be not hung up to dry.

It is generally the business of the overseer to revise the proofs for press, in doing which he will be careful not only to ascertain whether all the corrections marked in the proof are made, but also to cast his eye carefully over the sides, head, and bottom of each page, as it frequently happens that the folios or catch words drop out of the form in lifting it off the imposing stone ; also in leaded matter, letters at the beginning and end of lines frequently fall out of their proper place, and by their standing crooked have a slovenly appearance. Before the revise is given to the compositor, the number of the press for which it is intended should be marked in at the bottom of an even

page. It should be an invariable rule with the overseer to require a second revise, in order to see if all the corrections have been made which were marked in the first : this is indispensably necessary, particularly with foul compositors, as no sort of dependance can be placed on them.

He should, (where there is not a person engaged expressly for the purpose, as is the case in houses employing ten or fourteen presses), go regularly round, about every quarter of an hour, to the different presses, and examine their work, point out defects, if any, and glance again over the heads, sides, and bottoms of the pages, to see if any thing has been drawn out by the balls, which frequently occurs, from bad justification of the lines, and careless and improper locking up of the form.

An active and conscientious overseer will not be content with merely managing the concerns of the composing-room and press-room ; he will also see that the business of the warehouse is attended to with regularity and accuracy ; and that the warehouseman, errand boys, and apprentices do their duty.

It will be difficult for the overseer, even with the strictest attention to the foregoing rules, to preserve order and regularity, without some fixed regulations for that purpose, subject to fines on their non-observance. These regulations should be either written or printed, and hung up in a conspicuous part of the office. We submit the following, the major part of which was adopted by the father of the present Mr. Bensley, and have been acted upon in our office with much success for several years.

Rules and Regulations to be observed in a Printing-Office.

COMPOSITORS.

1. Compositors to receive their cases from the overseer, or other person appointed by him, free from all pie, or other heterogeneous matter, with clean quadrat and space boxes to both Roman and Italic, which they are to return to him in the same state, or forfeit six-pence for each pair of cases.

2. When a compositor receives letter, furniture, &c. from the overseer, he is to return what he does not use, in the same state he received it, the same day, under the forfeiture of three-pence.

3. Compositors to impose their matter when desired by the employer or overseer, or forfeit two-pence for every hour's delay. The same for proofs that are desired to be corrected, unless in either case it shall appear that all the stones were engaged.

4. When the compositor imposes from furniture in chase, he is directly to tie up the pages of loose matter, or forfeit one penny for every neglected page, besides being obliged to clear away the pie thereby occasioned.

5. Forms, immediately after they are imposed, to be carried to the proof press, and the proofs when pulled to be given to the reader, or carried into the reading closet, with, if a first proof, the copy, and, if a second, the foul proof, under the forfeiture of one penny for every quarter of an hour's delay.

6. Every compositor who shall leave a foul stone, either of letter, furniture, &c. shall forfeit one penny for every such offence.

7. Should a compositor detain an imposing stone longer than the nature of the business may require, he is to be fined two-pence for every hour's unnecessary delay.

8. When any cases are taken out of the racks, the compositor is to return them into their proper place immediately after he has done with the same, under the forfeiture of one penny for each case.

9. No cases to be placed over others, or under the frames, under the penalty of one penny for each case.

10. Gallies with head-lines, or other useful materials, during the course of a piece of work, to be cleared the day after the work is all completely at press, or the compositor to forfeit three-pence for each day's neglect.

11. When a work is completely finished, the compositor or compositors concerned shall, before he or they begin another work, unless prevented by the employer or overseer, clear away the forms, taking from them the head lines, white lines, and direction lines, as also the leads and riglets; which, with the furniture of each sheet, and the matter properly tied up for papering, are to be given to the overseer, or any person he may appoint.

12. Sweepings of frames to be cleared away before one o'clock every day, under the forfeiture of two-pence for each neglect. Matter broken by accident to be cleared away on the same day under the like penalty.

13. A compositor mixing any two separate founts, without an express order from the overseer, to be fined one shilling.

14. When a compositor carries his form down for press, he is not to put two forms together without a partition between, on forfeiture of two-pence; and in case, through neglect of such partition, a form should be

battered, the compositor guilty of such neglect shall forfeit six-pence.

15. The saw, saw-block, bowl, sponge, letter-brush, sheers, bellows, &c. to be returned to their respective places as soon as done with, under a forfeiture of one penny.

16. Any person taking a candlestick, bodkin, snuffers, composing-stick, &c. not his own, without permission of the owner, shall be fined three-pence.

17. Any person misplacing cases in the rack, or taking an upper without the lower case, (*vice versâ*), shall be fined two-pence.

18. That pie of any sort, on boards, windows, frames, &c. shall be cleared after five minutes' notice, under the penalty of six-pence.

19. That any person detected of taking sorts from the frames or cases of another, without leave, be fined one shilling. Should any person be detected in hoarding useful sorts, not wanting or likely to want them, he shall be fined six-pence.

20. Any person in the house, (except the master or overseer), who shall call off the errand boy while he is sweeping his rooms, to be fined three-pence.

21. That the master forfeit two shillings and six-pence, overseer one shilling, and compositor six-pence, for every candle left without proper charge:—The boundaries of the office to be considered the open air.

22. Jobs to be cleared away immediately after notice being given by the overseer, under the penalty of two-pence for every hour's delay.

23. All fines to be paid on Monday, before 12 o'clock, under the penalty of six-pence. The treasurer to make application for the fines before that time, or be fined six-pence.

24. These regulations, in cases of extreme hurry of business, by leave from the master or overseer, may be suspended ; but, when that has ceased, to be immediately resumed under the same forfeitures.

PRESSMEN.

1. All proofs to be pulled within five minutes after notice, or the pressmen who are in proofs to fine one penny for each form.

2. Immediately after pulling a proof, the pressmen to rub over the forms and chases with a lie-brush, and place them against the compositor's frame to whom they belong, where they are to leave the proof, or forfeit one penny for every neglect.

3. Working without a figure, unless particularly ordered, a fine of three-pence.

4. As soon as a form is wrought-off, the pressman to carry it to the lie-trough, and there completely rub it over with lie, rinse it with water, and then carry it to the wrought-off place, or to the end of the compositor's frame it belongs to. Three-pence for each neglected form.

5. Leaving the lie-jar uncovered, a fine of one penny.

CHAP. XV.

*The Business of a Reader.*

OUR readers will have already observed, that in Chap. VIII. we have given some account of the nature of correcting, and the duties of a corrector; but considering the immense importance of this branch of our business, we have thought it necessary to treat this subject still more minutely.

When it is considered how much the credit of our art, and the general interests of literature depend on the grammatical accuracy and typographical correctness of our labours, it will readily appear that a careful and steady *Reader* must be indispensable in every printing-office. We will therefore detail, at some length, the business and qualifications requisite to form such a reader, or corrector of the press, as can alone save the typographic art from degenerating into one of those ordinary occupations that require only the mechanical operation of the fingers, to form a perfect and complete workman.

It is always desirable that a reader should have been previously brought up to the business of a compositor. By his practical acquaintance with the mechanical departments of the business, he will be better able to detect those manifold errata which, unperceived by the mere man of learning and science, lie lurking, as it were, in a thousand different forms, in every sheet; and, if overlooked, give an air of carelessness and inattention to our labours, that must always offend the just taste and professional discernment of all true lovers of correct and beautiful typography.

Some of the principal imperfections, which are most easily observed by the man of practical knowledge in the art of printing, are the following: viz. imperfect and wrong-founded letters; inverted letters, particularly the lower-case round s, the n, and the u; awkward and irregular spacing; uneven pages or columns; a false disposition of the reference marks; crookedness in words and lines; bad making-up of matter; erroneous indention, &c. These minutiae, which are rather imperfections of workmanship, than literal errors, are apt to be overlooked and neglected by those readers who have no idea of the great liability there is, even with the most careful compositor, to fall into them—nay, the almost absolute impossibility of wholly avoiding them.

Although, on these accounts, it is certainly desirable that every reader should have been himself a compositor, we do not mean to infer, that even the imperfections we have just enumerated may not be observed by a reader who never was practically acquainted with the mechanical part of our business. Long and frequent habits of reading proof-sheets for the press, a quick eye, and a steady mind, will certainly enable any one, who is not a compositor, to detect those lesser deviations from correct-

ness, which the inexperienced and the careless are apt to overlook. But while these habits are acquiring, without which no person can be safely trusted to read a sheet for press, the labours of the printer are liable to go forth into the world in a manner that will reflect dishonour on the employed, and give offence to the employer. This observation will apply even to those readers who have previously been compositors. No proof-sheet, therefore, ought to be put to press, until it has been carefully read and revised by an *experienced* reader.

But even habit itself is not sufficient to form a competent reader, unless he possess those literary qualifications which are obviously necessary in an employment of this nature. No one ought to undertake the business of a reader, until he has made himself complete master of, at least, his native language.

A reader should be well versed in all the peculiarities of the English tongue—its idioms, its true genius, and singular adaptation to that variety of expression in which we embody our thoughts, and portray the human intellect. Instances will frequently occur, particularly in large printing-offices, where a knowledge of this nature and extent will be almost indispensable. Many, even of our first-rate authors, are too apt, in the warmth of discussion, the flights of speculation, and the laborious exercise of the thinking powers, to pass over, unobserved, those deviations from pure diction and strict grammatical accuracy, which they have imperceptibly acquired the habit of falling into, by their ordinary conversation with mankind. Now although no corrector of the press can strictly be required to do otherwise than to *follow his copy*, that is, faithfully to adhere to the original, with all its defects, yet every one must perceive, that it would often be performing a friendly, and perhaps a

charitable service, to point out, in proper time, imperfections and mistakes which have escaped the observation of a quick or voluminous writer. This remark will however chiefly apply to inaccurate orthography, and glaring instances of erroneous syntax. With the spirit, the opinions, the whims of an author, no corrector of the press has any right to interfere. Some writers, after all the labours of the printer, and the skill of the reader, are doomed to make their appearance in the world with many "imperfections on their head," are condemned to bear the contumely, and face the broad eye of an unrelenting critic : for who will undertake to instruct the "sparrow on the house top" to pour forth the plaintive, melodious strains which are peculiar to the modest and bashful nightingale ? In reprints of old and standard works, very little freedom of alteration ought to be granted to either correctors or editors.

We shall conclude this part of our subject by remarking, that a reader ought not to be of a captious or pedantic turn of mind : the one will render his situation and employment extremely unpleasant, and the other will tempt him to habits destructive of that consistency of character in his profession which he ought ever scrupulously to maintain. We are here alluding to a strict uniformity in the use of capitals, in orthography, and punctuation. Nothing hardly can be more provoking to an author, than to see, for instance, the words *honour*, *favour*, &c. spelt with the *u* in one page, and perhaps in the next modernized, and spelt without that vowel. This is a discrepance which correctors of the press should always carefully avoid. The like observations will apply to the using of capitals to noun-substantives, &c. in one place, and the omission of them in another. Whatever may be the different opinions or practices of authors in

these respects, the system of spelling, &c. must not be changed in the same work. Johnson may be the favourite of one author, and Fenning of another; but whether Johnson or Fenning happen to be the *lord of the ascendant*, the reader must be uniformly guided by the influence of the *ruling planet* !

There is a mistake very common among printers, that no standard can be laid down with respect to punctuation. It is true, authors differ much in their methods of punctuation; but this arises not from any want of a true system, but for want of due adherence to the right system. This is too often esteemed an attention beneath their notice; they therefore rely on the skill and experience of their printers in this respect. This being the case, the duty of punctuation is often made to devolve on the corrector; and what has been disregarded as a matter of little consequence, by the author, becomes an important part of the corrector's business. Let him discharge this duty with propriety and uniformity.

Having said thus much concerning the qualifications of a reader, we proceed to point out the proper application of those attainments, and to shew the process which every proof-sheet ought to go through before it is in a state of correctness proper to go to press.

While the pressman is engaged in pulling a proof, the compositors on the work ought to be collecting and arranging the copy, that both may be put into the hands of the reader for the purpose of clearing it from the most glaring literals, always having the copy lying upon his desk or table, ready to cast his eye upon in case of doubt or misunderstanding. This process, which is a kind of slight comparison of the copy and the proof, having been carefully and deliberately gone through, if the proof be not exceedingly foul indeed, (in which case it is best to have

it corrected before he proceeds any further), the reader should then call his reading-boy, to read the copy aloud to him. This should be able to read with ease and distinctness any copy put into his hands; and he should be instructed not to read too fast, but to pay as much attention to what he is engaged in, as if he were reading for his own amusement or instruction. The eye of the reader should not follow, but rather go before the voice of his reading-boy; for by a habit of this nature a reader will, as it were, anticipate every single word in his copy; and whenever any word or sentence happen to have been omitted in the proof, his attention will the more sensibly be arrested by it, when he hears it pronounced by his reading-boy. Great care, however, ought to be paid, lest the eye of the reader should go too far before the words of his reading-boy. For as he will be apt to be attending to the meaning of his author, he will read words in the proof which actually do not appear there, and the very accuracy of the reading-boy will but tend to confirm him in the mistake.

After having read through the proof, with the reading-boy, he should examine the signatures, catch-words, head-lines, titles and folios of every page, and mark, with accuracy, the *primer*, or connexion of the ensuing sheet. In marking the primer, care ought always to be taken, that not only the incipient word of the next sheet be marked, but also the number of the volume or part, (when a work consists of more volumes or parts than one) and the succeeding folio and signature. When all or any of these are neglected, if the compositor happen not to have set beyond the current sheet, which sometimes happens, or if he have not made up the first page of the next sheet, mistakes are in danger of being fallen into by the compositor; and it is obvious enough that it is the

interest of every reader to do whatever lies in his power to prevent a compositor from creating him any labour that can possibly be avoided.

When a proof has been thus compared and read by copy it should be forwarded to the compositor, to be corrected in the metal; but before this is done, an entry should be made of it in a book for that purpose, agreeable to the following plan.

Date of 1st reading.	Names of works.	Signatures.	Date when read for press.
1808.			
Feb. 3.	Holinshed's Chronicles	6 E	Feb. 4
	Langhorn's Plutarch, Vol. II.	H	3
4.	Monthly Repository	M	7

By thus keeping an account of the different readings of the proofs, the reader will be enabled at all times to state to the master or overseer the progress of the respective works in hand.

When the proof has been corrected in the metal, a *revise* should be immediately pulled, which, together with the first proof, should be put into the hands of the reader, whose next business is to collate the corrected sheet with the one he had before read, to see that all the errata are properly corrected. We believe it is the practice of some readers not to revise their proofs, but immediately to proceed to read them a third time, for press. This is a dangerous mode of procedure, and ought *never*

to be adopted. It is no small matter to clear a proof-sheet of all its imperfections: an error, once found, is therefore of too great importance to be passed unobserved; but this every reader is liable to, unless he revise every page of his proof with the utmost care and attention: for few foul compositors are able, in the ordinary course of their labour, to correct every error marked in the first proof. In revising a proof-sheet, particular care must be taken, that none of the fresh errors escape which compositors often make in the course of correcting the original ones. To avoid this, the reader ought not only to pay attention to the particular word which has been corrected, but always to read over, with care, the whole of the line in which that word is to be found. This is particularly necessary in cases where it has been requisite for the compositor to alter irregular or slovenly spacing; for in raising the line in the metal for that purpose, there is very great danger lest some word or letter should have fallen out, or some space have been put into a wrong place.

In offices where more readers than one are employed, it is always advisable that a proof-sheet should be read over by at least two of the readers. The eye, in going over the same track, is liable to be deceived into mistake and oversight. The interest excited by the first or second reading having abated, a degree of listlessness will steal upon the mind, extremely dangerous to the correctness of the proof.

In all cases where the first proof has been found to be very foul, it is necessary to read the whole sheet a second time by copy. It is almost morally impossible that a foul proof should be cleared of all its errors, or that every omitted word should be noticed in the first reading. And when also it is considered, that in cases of *outs* or *doubles*,

a compositor is as liable to make errors in the insertion of the one and improper connexion in the removal of the other as he was in the original composition and making up of the sheet, the propriety of reading foul proofs a second time by copy will be obvious to every one.

When a proof-sheet has undergone the regular process we have here laid down, the next thing is to forward it, along with the copy, to the author or editor of the work, or to such other literary person whom the publisher has appointed for that purpose. But, in order to prevent disputes in case of delay, no proof should be sent to an author or editor without first writing on it the date of the month on which it was forwarded to him. A memorandum should also be made of the return of the proof-sheet from the author or editor.

It ought always to be remembered, that that part of the copy which contains the connecting matter of the ensuing sheet, should be carefully transcribed or read off, a proof of that matter having been pulled for the purpose.

It may not be improper, in this place, just to take notice of the great danger to the correctness of a work which arises from the practice, too common with some authors, of keeping their proof-sheets too long in their hands, before they are returned to the printer. As the pages in the metal get dry, the adhesion of the types to each other is weakened, and the swell or extension of the quoins and furniture, which the moisture had occasioned, is removed; so that there is great danger of letters falling out, when a form is long kept from the press. Nor is the danger which is hereby occasioned to correctness the only inconvenience: the impatience of authors to see their works in a fit state for publication is almost proverbial. The pleasure arising from beholding, as it were, the "form and texture" of one's thoughts, is

a sensation much easier felt than described. That authors, therefore, may partake of this pleasure in a speedy and regular succession, they should make a point of forwarding their proof-sheets to the printer as quick as possible, not only that they may the sooner be got ready for press, but that the work may proceed in a regular manner, without being interrupted by the forwarding of other works in lieu of that, the proof-sheets of which are detained beyond the proper time in the hands of the author.

Authors are very apt to make alterations, and to correct and amend the style or arguments of their works when they first see them in print. This is certainly the worst time for this labour, as it is necessarily attended with an expense which in large works will imperceptibly swell to a serious sum; when, however, this method of alteration is adopted by an author, the reader must always be careful to read the whole sheet over once more with very great attention, before it is finally put to press.

A proof-sheet having duly undergone this routine of purgation, may be supposed to be as free from errata as the nature of the thing will admit, and the word "Press" may be written at the top of the first page of it. This is an important word to every reader: if he have suffered his attention to be drawn aside from the nature of his proper business, and errors should be discovered when it is too late to have them corrected, this word "Press" is as the signature of the death-warrant of his reputation; and if he is desirous of attaining excellence in his profession, will occasion an uneasiness of mind which will but ill qualify him for reading other proof-sheets with more care and correctness. A reader, therefore, should be a man of one business—always upon the alert—all eye—all attention. Possessing a becoming

reliance on his own powers, he should never be too confident of success. Imperfection clings to him on every side!—Errors and mistakes assail him from every quarter! His business is of a nature that may render him obnoxious to blame, but can hardly be said to bring him in any very large stock of praise. If errors escape him he is justly to be censured—for *perfection is his duty*! If his labours are wholly free from mistake—which is, alas! a very rare case—he has done no more than he ought, and consequently can merit only a comparative degree of commendation, in that he has had the good fortune to be more successful in his labours after perfection than some of his brethren in the same employment.

In some printing-offices, the business of revisal for the press devolves upon the overseer; on many accounts this is proper and convenient; but no reader should suffer his proofs to go to press, where there have been any very material errata, without their receiving a last inspection by himself. If he is doubtful of himself and diffident of his own powers of attention, how much more ought he to be on his guard respecting the care and attention of others! He should make it a rule never to trust a compositor in any matter of the slightest importance—they are the most *erring* set of men in the universe; and the attention of the overseer is liable to be interrupted by such a variety of causes and immediate demands, that he cannot always bestow the time and labour that is necessary in the revising a form for press. In this final operation on a proof-sheet, the eye must be cast along the sides and heads of the respective pages, lest any letter should happen to have fallen out, any crookedness have been occasioned in the locking up of the form, any battered letters, or any *bite* from the frisket.

These are the qualifications of a reader; this is the business of one employed as a corrector of the press. It is an arduous employment—an employment of no small responsibility, and which ought never to be wholly entrusted to the intemperate, the thoughtless, the illiterate, or the inexperienced.

CHAP. XVI.

*The Business of a Warehouseman.*

THE warehouse business of a printer is a highly important part of his concern ; the bad management of which involves his own credit, and materially affects the interest of his employers ; it is therefore indispensably necessary to appoint such a man for the management of it, who has been regularly brought up to the business, and on whom the utmost reliance may be placed for sobriety and honesty.

Some printers, with a view to save a few shillings per week, take into their service lads or men perfectly unacquainted with the business of the warehouse, who, through ignorance and carelessness, fall into many serious mistakes ; such as mixing paper of the same size, belonging to different persons, and thereby destroying the uniformity of the work ; giving or setting out the paper incorrectly, which must afterwards be made good by

reprinting those sheets which are found to be deficient ; or if the deficiency is not very great, the sheet wanting is left out of a book here and there, and in this imperfect state the work is delivered to the bookseller, who, perhaps, if a large number has been printed, will be several years before he discovers the loss, and then cannot, after so long a time, with any degree of propriety, demand his books to be made perfect. Many other circumstances might be stated to shew the impropriety and disadvantage of employing persons in the warehouse not acquainted with its business ; we must however observe, that the master or overseer should frequently look to the concerns of the warehouse, that the people employed there may get forward the different works with neatness and accuracy.

Having made these observations on the impolicy of employing persons in the warehouse unacquainted with its business, we will now proceed to lay down its different stages, and begin by supposing the warehouse to be quite clear, business coming in, and the warehouseman just entering upon his office. He should first be provided with a book which is termed "The warehouse-book," agreeable to the annexed plan, about the size of a foolscap quarto. When the porter or carman brings paper from the stationer or bookseller, the warehouseman should demand the bill of delivery, order the paper to be brought in, and see if it is right according to the bill, before he discharges him ; and if right, dismiss him, and enter it immediately into the warehouse-book, as follows :

The Warehouse-Book.

Stower's Printers' Grammar. No. (printed) 2000.

Date.	Receipt of Paper, and of whom.	No. of books delivered.	To whom delivered—with his signature.	For whom.
1807.				
Sept. 1	50 rms. of Messrs.			
	Longman and Co.			
15	100 Ditto			
Oct. 20		500	William Steady	Messrs. Crosby and Co.
24		500	John Williams	Ditto
27		25	J. Bindwell, Bookbinder	Ditto
Dec. 5	with waste	1025	William Steady	Ditto
		2050		

The above plan of the warehouse-book has been adopted in our own house for some years, and it has been found to answer the purpose of keeping a clear and satisfactory account of the transactions of the warehouse. It prevents disputes with the bookseller or author, relative to the receipt of paper, or delivery of books, as the signature of the person to whom the books were delivered can be immediately produced. It also enables the warehouseman to distinguish, with more ease, the different articles he might have occasion to refer to.

Having entered the receipt of the paper, he should then write on each bundle, with red chalk, the title of the book it is intended for, and remove it into a part of the warehouse most out of his way, or into a store-room kept for that purpose, observing, to place it so as to take up as little room as possible.

Of giving or setting out Paper for the Press.

A bundle of paper contains two reams, or forty-three quires, and twenty-four sheets to each quire, if perfect; if not, twenty quires to the ream, of which the two outside quires are called *corded* or *cassie*, as they only serve for cases to the ream. These outside quires are by the paper-maker made up of torn, wrinkled, stained, and other damaged sheets, yet the whole quire very rarely consists of such sheets; but frequently some good sheets may be found in looking them over. But the general custom now is, for booksellers and authors to send in their paper perfect. When, however, it is sent in imperfect, it is the warehouseman's business to lay by the two outside quires, and cull them when most convenient;

likewise to dispose of them so, that they may neither be at the beginning nor end, but about the middle of the volume ; or use them for jobs or proof paper ; for they are seldom so perfect as the inside quires.

It is the general custom to print of every work what is termed an *even* number, either 250, 500, 750, 1000, &c. These quantities are set out for the wetter in *tokens*: viz. for 250 (sheets) one token, containing 10 quires 18 sheets ; for 500, two tokens, one 11 quires, and the other 10 quires and a half ; for 750, three tokens, two of them 11 quires each, and the other 10 quires 6 sheets ; and for 1000, four tokens, three of them 11 quires each, and the other 10 quires. If a work is printed in half sheets, it of course requires only half the above quantities.

As it will sometimes happen that other numbers different from the above are printed, we have, therefore, given the following table, which shews the quantity of paper necessary for that purpose : also another table, shewing the quantity of paper to be given out for jobs of different sizes. This table, we conceive, will be found highly useful in the warehouse, and should be stuck up in a conspicuous place, or stitched into the warehouse book. The calculations have been made with much care, and will, we trust, be found accurate.

No.		Qrs.	Shts.
100	- -	4	10
150	- -	6	12
200	- -	8	16
300	- -	12	20
350	- -	14	22
400	- -	17	0
450	- -	19	2
550	- -	23	16
600	- -	25	20

No.		Qrs.	Shts.
650	- -	28	0
700	- -	30	4
800	- -	34	8
850	- -	36	12
900	- -	38	16
950	- -	40	20

The overplus sheets are allowed for tympan-sheets, register sheets, and other incidents, such as bad sheets, faults committed in beating, pulling, bad register, &c. for all or any of these incidents, the pressman doubles the sheet in the middle, and lays it across the heap as waste ; or in case that sheet should run short, the gatherer may chuse out the best of them to make good the deficiency. In setting out the paper, the warehouseman lays each token with the folded side, or back part, one way, and the other token with the folded, or back side, the other way, that the wetter may distinguish the different tokens ; when this is done, he writes a label, and puts it into the bundle, with the following inscription on it :—“ *Printers' Grammar, Friday, Jan. 8th*”—or whatever may be the title of the book, that the pressman, when he takes up the heap, may not take the wrong one by mistake ; and by writing this label, and the day of the month, he can at all times ascertain how long the paper has been wet, and thereby know the state it is in.

Of hanging up Paper to dry.

When the paper is worked off, the warehouseman takes the heap and carries it to a place where poles are fixed longitudinally, for the purpose of hanging them upon to dry, and lays it down on a stool, or table, of a convenient

height, with one end of the heap from him ; he then takes the handle of the peel in one hand, and lays the top part down upon the heap, so that the upper edge may reach near the middle of the sheet ; after which, with the other hand, he doubles over so much of the printed paper as he thinks sufficient to hang up at one lift, which should be about seventeen sheets, as near as he can guess, or twelve, &c. as he can allow time to dry, or have pole-room to hang them on. Nevertheless, there are some warehousemen who, to get rid of their work, will hang up a quire or more at a lift, which, through its thickness, keeps wet a long while, where it bears heavy on the pole ; besides it often draws out turpentine from the wood, which leaves a yellow stain upon the paper. But supposing the poles well seasoned, and not likely to stain, still it is hazardous, and ought on no account to be allowed. Some paper is much more liable to mildew than others, and particularly that part which rests on the pole, as it retains the water longer than the sides, which having the advantage of the air circulating between, get dry first.

Having thus doubled the first lift on the peel, he raises it, holding it aslant, that the shorter fold of the sheets may open from the peel, in order to convey it over the pole ; and then drawing the peel from under, leaves the sheets remaining on the pole, beginning at one end of the first pole, and so continuing, lift after lift, till he has completed the whole, observing that he lodges each lift about an inch one over the other, to prevent the air from blowing them down.

Of taking down the Sheets when dry.

When the sheets are sufficiently dry, the warehouseman takes his peel and brush, and with the peel begins with the last lift hung up, on account of the wrapper being with that lift, and continues to proceed to the other, successively taking them down and brushing them, till he has finished the whole ; taking care that he lays the single signature of each lift one over the other ; if this is not done, it will occasion considerable trouble to turn them when they are to be collated.

There is also another way of taking the sheets down from the poles, which is, by laying the flat side of the peel against the edge of that lift which hangs over the other books, and pushing the peel forward, he forces them to slide, one doubling over the other, and so finishes his business with more expedition. But this method cannot be recommended, because the dust, which naturally flies about, while the sheets are hanging, must lodge on them, and by pushing them forward, is rubbed in, instead of being brushed off.

Of putting by the Sheets, or Signatures, when taken down.

When the whole of the impression of the signature is taken down, he then removes them to the warehouse, and there knocks them up, and puts them by in that part of the room where they will be most out of his way, or in one of the stalls, till he has a sufficient number of signatures to form a gathering ; but two or three sheets

of each signature should be put by, in case the author, bookseller, or master, should want a copy of the work, or a specimen of as many sheets as are finished, before they are gathered; if he has not done this, and clean sheets should be wanted, he will then be obliged to lift every signature to get a sheet out of each; this will occasion a great loss of time, which may easily be prevented by reserving a few sheets as they are worked off. When he lays down the gathering, if they have not been wanted, it is easy to return them to their respective signatures.

Of laying down a Gathering.

To lay down a gathering, is to place the several heaps, with their signatures following each other, upon benches or forms of a proper height, beginning with the first signature of the body of the work, and laying it upwards, which is sometimes marked A, but in general B, placing it on the left end of the gathering-board with the length of the sheet before him, and the single signature (A or B) next him; he then follows with C, D, &c. laying them close to each other in the same position as the first, till he has laid down a sufficient number of sheets, which is commonly from B to M, unless the volume consists only of fourteen or fifteen sheets, in that case he may as well lay down the whole at once, rather than make two gatherings of them, he will then save himself the trouble of booking them; but where a volume runs through the alphabet two or three times, several gatherings must be made. In such cases, eleven or twelve sheets in a gathering is enough. The title, little a, b, c, cancels, &c.

if any, should be left till the last, and placed at the end of the gathering, so that, when folded, they may be found withinside the gathering.

Should the impression of each signature be so large as to cause the heaps, when laid down, to be too high for the gatherer, he may, if there is room enough on the boards, by dividing each heap, lay a double gathering, which is done in the following manner; taking one half from the first heap, and laying them, with a wrapper underneath, at the end of the last heap of the gathering, and so continuing to divide each heap successively, and laying them at the end of each other, till he has divided the whole; and as he lowers them, may, if he thinks proper, draw them up again as he finds most convenient; but where plays and children's books are done, containing three or four sheets, they should be laid down three or four times, to the full length of the gathering-board.

Of Gathering.

The art of gathering chiefly consists in not taking up more than one sheet at a time, and to gather those sheets with swiftness. He begins at the left hand of the row; laying his left arm across the first heap, he takes a sharp-pointed bodkin or needle in his right hand, and with the sharp end of it, just touches the right hand corner of the sheet, and raising his hand, lifts up that corner, which he immediatly receives in his left, and conveys it to the next heap, and is particularly careful to place it even over the other, that he may not have much trouble in knocking them up; taking the second in the like manner as the first, he goes to a third, fourth, &c. to the end, and then

proceeds to knock the gathering up ; viz. to ~~make~~ the sheets lie exactly even over each other ; which is done in the following manner : a table being provided for this purpose, or one end of the gathering-board clear, on which he has placed a wrapper, he takes the ends of the sheets between his thumb and fingers of each hand, and grasping them loosely, holding them upright, with the long side or edge on the surface of the table, lifts them up about four inches high, then lets them drop quickly through his hands, and catches them up again several times until they are quite even ; for by these repeated jerks, those sheets which were above the rest are driven downwards, and those that were lower, upwards, and by forcing his hands forward at the time of their falling, causes them to be even at the sides ; when he finds them exactly even, he lays them on a wrapper, and proceeds gathering on as before, knocking them up, and placing them on the one he has just gathered, with the single signature of each gathering, lying successively one upon the other, still going on in the same manner, till he has piled them to a convenient height ; he then covers the pile with a wrapper, to keep the dust from soiling the top sheet, and proceeds working up, pile after pile, till the whole is finished ; but, while he gathers, keeps his eye on the sheets, lest any should be torn, dirty, &c. and if he finds any of that description, he doubles them up, and puts them at the bottom of the heap they belong to.

The most general, and perhaps the most expeditious mode, is to use neither bodkin nor needle, but damp the end of the thumb with the tip of the tongue, and by this means lift up the sheets ; but great care must be taken that the fingers are perfectly clean, or a great number of sheets will be spoiled.

When the gatherer has worked till one of the sheets is deficient, (for it would be an extraordinary circumstance for them to be just equal), he doubles up the odd sheets upon one another, covers them up with wrappers, and then puts them by till he collates.

Of collating Books.

The warehouseman takes some of the books which have been gathered, and puts them on a table or gathering-board, with the single signature before him, at his right-hand, and his left arm across the heap; he then, with a sharp-pointed bodkin or needle, lightly pricks up the corner of the first sheet of the single signature, viz. A, or B, and with the thumb of his left hand catches it up, and nimbly shifts it between the two fore fingers of the same hand, that he may be ready with his thumb to do the same to a second, &c. for if he does not thus secure the sheets between his fingers, on receiving the next, the latter sheet would immediately fall back, and obstruct his view of the following signature; for the collator cannot be too attentive in observing whether the gathering be true, that is, free from having two sheets of one signature, sheets turned the wrong way, or left out in the gathering, &c. and if he finds a sheet wanting or damaged, he may supply the defect from the heaps on the gathering-board, as it is the best and the most expeditious mode for the warehouseman to go on with the collating at the same time the errand boy, or some other person, is proceeding with the gathering. If duplicates have been gathered, he draws the overplus sheets from the rest, and lays them aside till he has collated the pile, after which he distributes them to their respective signatures.

Having collated a gathering, he lays it on his left, with a wrapper underneath, to keep the board from soiling the sheet; then collates another, and puts that on the one he has just laid down, not even, but rather across it, that when he begins to fold, he may with ease distinguish each gathering, and continues in the same manner till he has thoroughly examined the pile. Others again do not lay the gatherings down separately; but, when one is done, put the collated corner from them, and draw the next near them, and so proceed, moving each gathering backwards and forwards as they collate them; and when they have got a sufficient handful, turn them over, and keep going on as before, till the pile is finished. This way, if properly attended to, is the best, as it expedites the work, and answers the same end.

Of Folding.

Having collated the heap or pile of gathered books, he proceeds to folding, which is performed in the following manner: the gatherings being on one side of him, he takes down one of the books from the rest, knocks it up on the board or table, and then keeps the single signature of the first sheet with its face downwards to the table, so that when he doubles it up, he folds the last sheet inwards, and the first outwards. The manner of knocking the book up having been already described, a repetition of it here is needless; so, supposing the sheets exactly even one over the other, he lays the gathering flat on the table, and having hold of the ends, or sides, in his hands, doubles the right hand hold over to the left; but before he receives the end of the book from his right hand, he nimbly shifts it to his left, between the

two fore fingers of the same hand, and then releases the other end from the right; for, by having it in that position, that is, with his fore finger between the two folds, he can (though not doubled quite even) shift it which way he thinks proper, without discommoding any of the sheets.

It being now doubled up, and the edges placed exactly even over each other, he rubs the palm of his right hand hard on the fold or back part of the book, that it may remain close together. When this is done, he lays it on the wrapper near him, and works on as before, observing to fold them as the work requires: viz. if twelves, in the long cross; and if folio, quarto, octavo, sixteens, eighteens, or twenty-fours, in the short cross.

Folding books is an important concern, and ought to be particularly attended to by the printer, because, if they are unevenly folded, the dust, by long standing, will work in, and soil those sheets that come out further than the rest, so that, when bound, they will have on the margin a border of dust, unless the binder cuts very deep, which must be allowed to deface the beauty of a volume. On the other hand, if the binder is nice in his work, and will not suffer a bad sheet to appear in it, he sends word that it is wanting, and it is very rarely that he sends back the damaged sheet, which impoverishes the waste, and is likewise an additional disgrace to the warehouseman for his negligence in not properly collating the books; and should it happen to be the sheet which is short in the gathering, a book must thereby be rendered imperfect, none of that signature being left to make good the deficiency. It is necessary here to observe, that though books seem apparently uneven, it is not always owing to the folder's negligence; therefore, before blame can properly be attached to him, the books should be first

examined ; because, though the quality of the paper has been attended to by the purchaser, yet perhaps that nicety respecting the size may not have been so much regarded by him, so that some of the sheets in a volume, or gathering, are frequently found to differ half an inch in size.

In some paper the sheets run equal enough as to size, but are not square ; and if folios, quartos, octavos, or sixteens, were to be folded with the two bottom corners even together, they would be extremely uneven ; therefore the best that can be done, when it so happens that the sheets run in this unsquare manner, is to knock them up well, and fold them so that they may at least be brought even at the middle of their outer margins ; then the outer margin of each side will share the defect alike.

When sheets are flimsy, which is sometimes the case, the more the folder knocks them up the worse they are, for the knocking them up only batters their edges, instead of bringing them even ; therefore, before they are folded, the uneven sheets must be pulled even, and then gently knocked up.

Of counting out and pressing of Books.

Having folded a parcel, or the whole of the gathered books, the warehouseman proceeds to count them out into proper quantities, according to the thickness of the gathering ; if very thick, only five ; if thin, ten, fifteen, twenty, or twenty-five, nay, sometimes fifty, according to their thickness ; and observes to keep the same number in the count of each different gathering throughout the work. He then lays them flat on the table, and gives them a blow or two with the palm of his hand on the folded or back side to make them lie close ; after which

he gently knocks them up even, and puts them in the standing press, if empty ; if not, in a convenient place, on a wrapper, or waste sheet, till the press is empty, with the folded or back side of the first parcel one way, and the second quantity of books with the folded side or back the other way, and continues in the same manner, putting them on one after the other, till the press will permit no more in height ; then he proceeds to pile up, range by range, till full, observing that each range contains an equal quantity of books, and stand in a right parallel, that when they are screwed down they may all receive an equal pressure ; the reason why he is particular in reversing the edges of each count is, that if he did not, it would be impossible to pile them up straight with their backs to lie all one way ; for, in printing, if the matter does not run close and even alike, but, on the contrary, some pages are loose and open, and others close, the open pages, receiving a deeper impression than the close, make that part of the sheet swell, while the remaining ones lie closer ; therefore, were a number of books to be piled (before pressed) with their backs one way, they would be raised up at one end, and consequently would soon slide down ; which inconvenience is remedied by reversing them ; for, turning the thick end on the thin, they are brought to lie level ; besides, their number then can readily be told.

The press being now full, the warehouseman takes the wooden pin belonging to it, and screws it down as low as he can, after which he takes a strong iron bar, that measures about five or six feet in length, and with it works the spindle of the press round with all his force as tight as he possibly can, and lets the books remain in it about twenty-four hours before he takes them out ; the time being expired, he takes them out of the press,

and puts them in one of the stalls, but covers them neat and close with a wrapper under and over, so that the dust may not easily penetrate; then writes a label and puts in the pile, expressing on it the title of the book, and how many the parcel contains; but should the impression be more than the press will admit of at once, he fills it up again in the like form as the first, and so continues till the whole is completed.

If the impression is not very large, and will make only a few bundles, or that he expects to have them a long time under his charge, he ties them up into bundles, laying a wrapper under and over each, and writes the title and the number of books in the bundle on the upper wrapper, then puts them aside in the store room, or some convenient part of the warehouse, that he may have free access to deliver them out according to order. As soon as the books are finished, he acquaints the author or bookseller that the whole of the impression is ready for delivery.

Of making up the Waste.

After the books have been collated and folded, and the duplicate sheets that were drawn out distributed, he takes the last signature first, and shakes the spoiled or doubled up sheets out, if any, from between the others, then lays the overplus clean sheets flat on the table, with the single signature upwards towards him, and opens the doubled or spoiled sheets, and places them on the former with the signature the same way. This done, he turns them over, knocks them even, folds them, and puts them near him, with the single signature upwards; he then takes the sheets that lie next to the signature he has just

folded, and does the same to that, placing it on the other, and continues till he has finished the whole; after which, he presses and ties them up together, and writes on the bundle which sheet is deficient, and the title of the book, then puts them in a proper place, where they will be ready to come at, whenever he may have occasion; but it must be observed, if there should be amongst the sheets distributed, any of the signature that was wanting, he gathers again, till that, or some other sheet, is deficient, collating and folding them, and putting them with the other books.

Of Booking the different Gatherings.

When a volume runs through several alphabets, it must consequently make more than one gathering; therefore to put the different gatherings together in regular succession to make a complete volume, the warehouseman takes as many counts of the first gathering as he can conveniently carry, and lays them on the place where they are intended to be booked. He then lays a wrapper on the gathering board, and takes the first count or reversed parcel, and places it on it, with the single signature upwards; a second quantity is then laid down in the same way, with their backs one on the other, and placed so that the end of one of the parcels may project outwards, while the end of the other is turned inwards, and continues piling them in this distinct manner, till he has got them sufficiently high; after this is done, the second gathering is placed by the side of the first, with their outer margin against the backs of that gathering, and piled up in the same manner, till it contains the same number of gatherings as the first parcel.

If a book makes more than two gatherings, they are laid down one after the other, as before observed. The utility of laying down each count, so that they may project a little over each other, will be readily perceived ; for should he take two gatherings of one sort, or let one slip from his fingers unperceived, (which is not improbable where there is a number of gatherings in a volume), on their being placed in this manner, he quickly discovers his error by their not running equal at the end of every count. If he does not lay them in this manner, a mistake of this sort will not be detected till he comes to the bottom of each gathering ; and then to rectify the error will be attended with much trouble. When he has laid down some of each gathering, he proceeds to book them, which is done by taking one from each parcel, beginning with the first ; he then knocks them even, and places them on a wrapper, reversing each book. They are afterward tied up in bundles, or piled away in a convenient part of the warehouse, with a wrapper under and over, and a label in each pile. If some odd gatherings are left, (which is highly probable), they are then added to the bundle of waste, and a memorandum made of it on the upper wrapper.

CHAP. XVII.



An Account of the different Advances in Journeymen's Wages, from the Year 1785 to 1805, with the present Regulations and Scale of Prices.

IN the early stages of the printing business, the mode of paying the workmen employed in it must have been similar to those of every other business or manufactory in its infancy ; viz. on established weekly wages. The idea of laying down fixed charges for different kinds of work was not suggested for nearly two centuries after the discovery of our art ; nor indeed till the year 1785 had there been any regular scale of prices printed. From that time to the year 1805, several advances have taken place on the wages both of compositors and pressmen.

The scale of 1785, agreed to at a general meeting of the master printers, held at the Globe-tavern in Fleet-street, on Friday the 20th of November, is as follows ; also the succeeding advances, including the regulations and scale of 1805.

That the price of work, paid for by letters be advanced from fourpence to fourpence halfpenny per thousand, including English and brevier; and, in leaded matter, the ems and ens at the beginnings and ends of the lines not to be reckoned in the width.

That pamphlets of five sheets, and under, be paid one shilling per sheet above what they come to by letters.

That all works wholly printed in a foreign language, though common type, be paid fivepence per thousand.

That fivepence per thousand be paid for all dictionaries of two languages, in brevier or larger type; but not for English dictionaries, unless attended with peculiar trouble.

That the price of Greek be advanced in the same proportion as that of common work.

At an adjourned meeting of the committee of master printers, on Monday the 11th day of March, 1793, in consequence of a circular letter from the compositors, dated the 14th of February last, requesting,

1. That all works be cast up with the heads and directions inclusive;

2. That em and en quadrats, or whatever is used at the ends of lines, be included as in the above article:

The committee, having held a conference with a deputation from the compositors at large, agree to recommend to the master printers to comply with the first request; understanding that the head line (whether larger or smaller) is to be reckoned like the text; and that, where the length of the page is not exact even ems, if it does not exceed an en, it is not to be considered as a line.—Directions and signatures to be reckoned in the gauge.

The above increase of price to commence on Lady-day, but not to extend to any works at that time unfinished.

In periodical works, to commence with the next new volume after Lady-day,

At a general meeting of the master printers, at the Globe-tavern, December 18, 1795, convened by the committee, to consider of certain propositions submitted to them by the compositors—It was resolved,

That from the 1st of January, 1796, all works printed in a larger type than English, shall be cast up wholly as English.

At a meeting in December 24, 1800, of the master printers of London and Westminster, held for the purpose of taking into further consideration the state of the trade, both in respect to the workmen and their employers—

It was stated, that a general dissatisfaction still remained among the compositors, concerning the advances granted them at a former meeting, (Nov. 29), they expecting to have had an additional allowance of one half-penny per thousand on works printed from manuscript copy.

The same was taken into consideration; and, upon deliberate discussion, it was found impracticable to comply with their expectation; the meeting being convinced, that to make any distinction between manuscript and reprint would be an unjustifiable departure from the established and long-approved principles by which works have been appreciated. But, considering the extreme and increasing pressure of the times (the article of bread alone having risen to the unusual price of one shilling and sevenpence halfpenny the quartern loaf), it was resolved—

That, upon the first article of the compositors' scale,

one farthing more per thousand be allowed in general, without making any distinction between manuscript and reprint ; to take place on all works begun on or after the 1st of January, 1801.

The following is the composition scale as now amended.

I. That the scale of 1785 (whereby an advance of two shillings and sixpence in the pound was given)—as amended in 1793 (when the further advance of including head-lines and directions was acceded to)—and as subsequently amended in 1796 (respecting works done in larger type than English)—is a fair and applicable scale to judge and appreciate work by.

II. That the following further advances and regulations be made on the above scale :

1. That the price of works paid for by letters be advanced from fourpence halfpenny to fivepence farthing per thousand, including English and brevier.

2. That all works printed in any foreign language, though common type, be advanced to fivepence three-farthings per thousand, including English and long primer.—In burgeois or brevier to sixpence per thousand.

3. That all dictionaries of two or more languages, in brevier or larger type, in quarto and octavo, be advanced to fivepence halfpenny per thousand ; if in duodecimo or eighteens, to sixpence per thousand.

4. That corrections be advanced to fivepence per hour.

III. That jobs, and other works not specified in the above prices, or in the annexed schedule, bear a proportionate advance.

Job masters' resolutions ; viz.

1. That every article, *under one sheet*, be considered a job, and be paid sixpence halfpenny per thousand.—Threepence to be considered as sixpence ; under threepence to be lost.

2. One sheet and under five to be cast up as usual, with one shilling a sheet for the imposing.

3. Corrections on all jobs to be paid sixpence per hour.

4. All jobs, not hitherto paid by letters, to be allowed sixpence in every three shillings.

5. All jobs in foreign languages to be paid sevenpence halfpenny per thousand.

6. The imprint not to be included in the square of the page.

7. Jobs having two or three head rules, and four columns, to be considered tabular ; all above to be reckoned table-work. The first to be paid one and one-half ; the second double price.

At a meeting held on the 19th of February, 1805, and at two subsequent adjourned meetings on the 20th and 26th, at the York Hotel, New Bridge-street, consisting of eight master printers and an equal number of compositors, duly authorized by their respective bodies, the following regulations and scale of prices for compositors' work, were adjusted and agreed to :

Article 1. All works in the English language, common matter, including English and brevier, to be cast up, as settled in December, 1800, at fivepence farthing per thousand ; if in minion (being a type not very prevalent) to be cast up at fivepence halfpenny ; in nonpareil, sixpence farthing ; and pearl, eightpence ; heads and directions, or signature lines, included. A thick space to be considered an en in the width, and an en to be reckoned an em in the length of the page ; and, where the number of letters amounts to five hundred, a thousand to be charged ; if under five hundred, not to be reckoned ; and if the calculation at per thousand shall not amount to an odd threepence, the odd pence to be suppressed in

the price of the work ; but where it amounts to, or exceeds threepence, there shall be sixpence charged.

2. Works printed in great-primer to be cast up as English ; and all works in larger type than great-primer as half English and half great-primer.

3. All works in a foreign language, though common type, to be cast up at fivepence three-farthings per thousand, including English and long-primer ; if in bourgeois or brevier, sixpence per thousand ; minion, sixpence farthing ; nonpareil, sevenpence ; and pearl, eightpence three-farthings.

4. English dictionaries of every size to be paid fivepence three-farthings per thousand. (In this article are not included gazetteers, geographical dictionaries, dictionaries of arts and sciences, and works of a similar description, except those attended with extra trouble beyond usual descriptive matter). Dictionaries of two or more languages, of every size, to be paid sixpence per thousand. If smaller type than brevier, to take the proportionate advance specified in article 1.

5. English grammars, spelling books, and works of those descriptions, in brevier or larger type, to be cast up at fivepence halfpenny per thousand ; if in two languages, or foreign language, to be cast up at fivepence three-farthings per thousand.

6. Small sized folios, quartos, octavos, and works done in great-primer or larger type (English language) which do not come to six shillings when cast up at the usual rate, to be paid as follows : English and larger type, not less than six shillings ; pica, seven shillings and sixpence ; English twelves to be paid not less than nine shillings and sixpence ; and pica not less than ten shillings and sixpence per sheet.

7. Reviews, magazines, and works of a similar description, consisting of various sized letter, if cast up to

the different bodies, to be paid two shillings per sheet extra.

8. Pamphlets of five sheets and under, and parts of works done in different houses, amounting to not more than five sheets, to be paid one shilling per sheet extra; but, as it frequently occurs that works exceeding a pamphlet are often nearly made up without a return of letter, all such works shall be considered as pamphlets, and paid for as such.

9. Works done in sixteens, eighteens, twenty-fours, or thirty-twos, on small-pica and upwards, to be paid one shilling and sixpence per sheet extra. If on long-primer or smaller type, one shilling per sheet extra. Forty-eights to be paid two shillings per sheet extra, and sixty-fours two shillings and sixpence per sheet extra.

10. Works requiring an alteration or alterations of margin, to be paid for each alteration one shilling to the pressmen if altered by them, and sixpence to the compositor as a compensation for making up the furniture; if altered by the compositor, then he is to be paid one shilling for the alteration, and the pressmen sixpence for the delay.

This article to be determined on solely at the option of the employer.

11. Bottom notes consisting of twenty lines (or two notes, though not amounting to twenty lines) and not exceeding four pages, in every ten sheets, in quarto or octavo;—one page, (or two notes, though not amounting to one page) and not exceeding six pages, in twelves;—two pages (or two notes, though not amounting to two pages) and not exceeding eight, in eighteens or above; to be paid one shilling per sheet; but under the above proportion no charge to be made. Bottom notes consisting of ten lines (or two notes though not amounting to ten lines) in a pamphlet of five sheets or under, and not ex-

ceeding two pages, to be paid one shilling per sheet extra. Quotations, mottos, contents to chapters, &c. in smaller type than the body, to be considered as notes. [Where the notes shall be in nonpareil or pearl, in twelves, the number of pages to be restricted to four; in eighteens, to five pages; and, if the number of sheets or notes in a volume shall exceed what is stipulated, to take the proportionate advance.]*

12. Side notes to folios and quartos not exceeding a broad quotation, if only chap. or date, and not exceeding three explanatory lines on an average in each page, to be paid one shilling per sheet; in octavo, if only chap. or date, and not exceeding three explanatory lines on an average in each page, one shilling and sixpence per sheet. Cut-in notes, in smaller type than the body, to be paid for in a similar manner.

Side and bottom notes to many, particularly historical and law works, if attended with more than ordinary trouble, to be settled between the employer and journeyman.

13. Greek, Hebrew, Saxon, &c. or any of the dead characters, if one word and not exceeding three lines in any one sheet, to be paid for that sheet one shilling extra; all above to be paid *ad valorem*.

14. Greek without accents to be paid eightpence per

* The committee of master printers, to elucidate the 11th article, have lately circulated the following paragraph.

“ It appearing to the committee of master printers that the clause within crotchets in article 11, of the Regulations and Scale of Prices for compositors’ work, as adjusted and agreed to in February, 1805, has been in some respects wholly misunderstood, the committee think it right to explain, that *that* article was intended only to fix what constituted the charge of one shilling per sheet for bottom notes; and that all works requiring a higher charge than one shilling are to be paid *ad valorem*, as heretofore.

“ York-Hotel, May 13, 1805.

J. NICHOLS, Chairman.”

thousand ; if with separate accents, ninepence halfpenny per thousand : the asper not to be considered an accent.

15. Hebrew, Arabic, Syriac, &c. to be paid double : Hebrew with points to be cast up as half body and half points doubled.

16. Music to be paid double the body of the sonnet type.

17. Index matter, though but one measure, to be paid one shilling per sheet extra.

18. Booksellers' catalogues to be cast up at sixpence per thousand, not including the numbering.

19. Em and en quadrats, or whatever is used at the beginning or end of lines, to be reckoned as an em in the width.

20. Night work to commence and be paid for from eleven o'clock till one, one shilling ; till two, one shilling and six-pence ; and threepence per hour extra till six.—Morning work, commencing at four o'clock, to be paid one shilling extra.—Sunday work to be paid twopence per hour, provided it amounts to not less than one shilling.

21. Jobs of one sheet or under (except auctioneers' catalogues and particulars) to be cast up at sixpence halfpenny per thousand ; if done in smaller type than brevier, to take the proportionate advance specified in article 1.

22. Jobs in foreign language, of one sheet or under, (except auctioneers' catalogues) to be cast up at sevenpence halfpenny per thousand ; if done in smaller type than brevier, to take the proportionate advance specified in article 1.

23. Where two pages only are imposed, either opposite to or at the back of each other, they shall be paid for as two pages ; but if with an indorse, or any other kind of matter constituting a third, then to be paid as a sheet, if in folio ; a half-sheet if in quarto, and so on.

24. Broadsides, such as leases, deeds, and charter-parties, above the dimensions of crown, to be paid the double of common matter ; on crown and under, to be paid one and one-half common matter.—The indorse to be paid one-fourth of the inside page.

25. All corrections to be paid sixpence per hour.

26. The imprint to be considered as two lines in the square of the page.

27. Different volumes of the same work to be paid for distinctly, *ad valorem*.

Any disputes that may arise in future, we agree to refer to the decision of the committee of masters.

On behalf of the Masters.

(Signed) JOHN NICHOLS
LUKE HANSARD
THOMAS BENSLEY
GEORGE WOODFALL
CHARLES BALDWIN
THOMAS GILLETT
DAVID NATHAN SHURY
WILLIAM RUFFY

On behalf of the Compositors.

(Signed) EDWARD DAVENPORT
JAMES ATKINSON
CHARLES FAGAN
SAMUEL C. FAWCETT
WILLIAM MAGRATH
PHILEMON CHALK
CHARLES HIGLY
HENRY DENCH

Price of the Composition of Cases.

	Per sheet.		
In English	-	-	0 14 0
Pica	-	-	0 17 0
Small pica	-	-	1 1 0

The regular and proper width of cases is forty-seven small pica ems.

The length, in English, sixty-eight lines long ; pica, seventy-seven ; small pica, eighty-eight ; exclusive of heads and catch-lines.

Price of the Composition of Bills in Parliament.

	Per sheet.		
In Pica, without notes,	0	6	6
English, with notes	0	7	6
Pica, with notes	0	8	6

The regular size of a bill, in English, is twenty-five ems wide, and forty-three lines long; in pica, twenty-nine ems wide, and 42 lines long, and leaded, exclusive of head and catch-word.

Of casting off Matter.

In page 134, we particularly recommended to the trade two rules admirably adapted for measuring off matter or printed pages, being much more expeditious and certain than quadrats; they may here be exemplified in the following plan for calculating the amount of the composition of a sheet in twelves. The page must be measured from the head-line to the catch-word or signature, inclusive; the width measured, and invariably doubled.

EXAMPLE—Brevier.

55	lines long			
60	ems wide			
3300				
24				
13200				
6600				
79200	'at 5½d. per thousand,	-	-	1 14 6
Notes (if any)	per sheet	-	-	0 1 0
				1 15 6

Every compositor should keep an account of the number of pages he has composed, charged, &c. This is indispensably necessary when engaged in the same work with other compositors ; we therefore submit to him the following plan of a book, which we conceive will be found to answer this purpose.

Plan of a Compositor's Check-Book.

Title of the Work.							
Sig.	Set.	Imposed	Charged.		Sig.	Set.	Imposed
A					A		
B					B		
C					C		
D					D		
E					E		
F					F		
G					G		
H			Set in all.		H		
I			Sheets.	Pages.	I		
K					K		
L					L		
M					M		
N					N		
O					O		
P					P		
Q					Q		
R					R		
S					S		
T					T		
U					U		
X					X		
Y					Y		
Z					Z		

Pressmen's Scale of Prices.

FOLIOS.			
On medium or demy.			
	1000 & upwards	750 & 500	250
Not exceeding fifty-two pica ems, upon small pica and upwards	4½	5	5½
If on long primer, burgeois, or brevier	5	5½	6½
All above fifty-two pica ems, upon small pica and upwards	5	5½	6½
If on long primer, burgeois, or brevier	5½	6	6½
Long primer and upwards, on copy or crown	4½	5	5½
QUARTOS.			
On medium or demy.			
Not exceeding forty pica ems on long primer and upwards	4½	5	5½
If on burgeois or brevier	5	5	5½
All above forty pica ems, and not less than long primer	5	5	6½
If on burgeois or brevier	5½	5½	6½
Brevier and upwards, on copy or crown	4½	5	5½
OCTAVOS.			
On medium or demy.			
Not exceeding twenty-four pica ems upon small pica and upwards	4½	5	5½
If on long primer, burgeois, or brevier	4½	5	6½
All above twenty-four pica ems, on brevier or upwards	5	5½	6½
If less than brevier	5½	6	7½
Brevier and upwards, on copy or crown	4½	5	5½
TWELVES.			
On medium or demy.			
Not exceeding twenty-one pica ems, upon long primer and upwards	4½	5	6½
If on burgeois or brevier	5	5½	6½
All above twenty-one pica ems, upon long primer and upwards	5	6½	7½
If on burgeois or brevier	5½	6½	7½
Long primer, burgeois, or brevier, on copy or crown	4½	5	6½

EIGHTEENS.

	1000 & upwards	750 & 500	250
If not less than small pica	$4\frac{1}{2}$	5	$6\frac{1}{2}$
If on long primer, bourgeois, or brevier	5	$5\frac{1}{2}$	$6\frac{1}{2}$
If less than brevier	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$

TWENTY-FOURS AND THIRTY-TWOS.

If not less than small pica	5	$5\frac{1}{2}$	$6\frac{1}{2}$
If on long primer, bourgeois, or brevier	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$
If less than brevier	6	$7\frac{1}{2}$	$8\frac{1}{2}$

POCKET-BOOKS.

Octavo.

Post or crown, twenty-one pica ems wide, thirty-five long	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$
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Twelves.

Pot, such as Ladies and Christian Ladies table part, 6mo, thirty-five pica ems wide, twenty-six long	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$
Pot, such as Ladies and Christian Ladies miscellany part, sixteen pica ems wide, twenty-six long	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$
Copy, Christian Gentleman's, twenty wide, thirty-five long	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$

SCHOOL BOOKS.

Twelves.

Copy or crown, not exceeding seventeen pica ems wide, and thirty-one long, nor less than brevier	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$
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Octavo.

Copy or Crown, not exceeding twenty-one pica ems wide, nor less than long primer	$4\frac{1}{2}$	5	$5\frac{1}{2}$
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N. B. School books on copy or crown are defined to be Palairer's French grammar, Chambaud, Salisbury spelling book, Fox's lessons, Ward's Latin grammar, and all of a similar description.

BILLS IN PARLIAMENT

From No. four inclusive, to any number under one hundred	4
If one hundred, and under two hundred	$4\frac{1}{2}$
If two hundred, or two hundred and fifty	5
Above two hundred and fifty, and under four hundred	4
If four hundred or five hundred	$4\frac{1}{2}$
Above five hundred, and under seven hundred	4

If seven hundred, or seven hundred and fifty	.	.	4½
All above seven hundred and fifty	.	.	4

ALMANACKS.

Royal broadsides	.	.	.	.	.	6½
Demy ditto, size Wing or Cambridge	.	.	.	.	.	5
Goldsmith, calendar form	.	.	.	.	.	5
Do. prog.	.	.	.	.	.	4½
Twelves demy, nineteen ems wide, thirty-four long, calendar sh.	.	.	.	.	.	5
Do. prog.	.	.	.	.	.	4½
Do. crown, size Rider	.	.	.	.	.	4½
Octavo foolscap, twenty ems wide, thirty-four long, calendar and prog.	.	.	.	.	.	4½

N. B.—Side notes to be reckoned in the width, bottom notes not to be regarded.

Works on royal paper to be paid one halfpenny per hour more than the above prices.

Ditto on foolscap or pot, not less number than one thousand, and worked at one pull, fourpence.

Ditto in square pages (like Entick's dictionary) and works for the public offices, to be paid one halfpenny per hour more than allowed by the scale of 1794.

Fine paper of the same size, if included within the token, not to be charged extra; but if of a larger size, then to be paid according to the scale.

Three or more proofs pulled at one time to be charged threepence halfpenny per form; and if made ready to be charged as a token.

Cards, large or small, to be paid sixpence per hundred.

That jobs, and other works not specified in the above scale, shall bear an advance of one halfpenny per hour more than was paid previous to the above date.

1000 of a sheet, perfect, is charged as 16 hours work.

750	.	.	12 ditto.
500	.	.	8 ditto.
250	.	.	4 ditto.

Consequently, 1000 at 4½d. is 6s.—at 5d. is 6s. 8d.—at 5½d. is 7s. 4d.—at 6d. is 8s.

CHAP. XVIII.

*Tables of Calculations, &c.*

TO be enabled to keep a satisfactory and certain check on the charges of compositors and pressmen must be highly desirable. Errors and impositions will sometimes creep into their bills; there are many ways of detecting those mistakes, but the following plan appears to us more clear, concise, and satisfactory, than any other we have yet met with. It also exhibits at one view all the expenses attending the printing of a work; and from this statement the printer will be able in a few minutes to make out his bill.

The figures opposite the signature, and under the compositors' names, denote the number of pages charged by each man in that signature. By entering the pages in this way, it will be instantly discovered if either have written too many, by the total amount exceeding the proper number contained in a sheet.

As jobs cannot be entered in this book, and as it is here equally necessary to keep a check on the compositors and pressmen, as well as a regular account of this part of our business, we also submit a plan of a book for that purpose.

Plan of a Book for checking Compositors' and Pressmen's Bills.

[illegible]

A Table of the Price of any Number of Pages in Octavo, Twelves, and Eighteens.

The figures on the top of the columns denote the price of each sheet; those in the first column, the number of the pages; and the following sums shew the amount.

N. B.—When the fractional part of any of the different sums is more or less than a farthing, the higher sum is always allowed.

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	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.
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2	10	2	11	1	1	0	1	7	1	1	2	1	3	1	11	3	1	4	2	5	1	1	6	1	7	1	8	1
3		3		2		6		1			2		1		3		2		2		2		3		2		3	
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	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	
19	12	8	12	11	13	2	2	13	5	2	13	8	3	14	0	14	3	14	6	15	0	2	15	3	3	15	7	15	10
20	13	4	13	7	2	13	10	3	14	2	14	5	2	14	8	3	15	0	15	3	2	15	6	1	2	16	4	16	8
21	14	0	14	3	2	14	7	14	10	2	15	2	15	5	2	15	9	4	16	0	2	16	11	17	2	17	2	17	6
22	14	8	14	11	3	15	3	2	15	7	15	10	3	16	2	2	16	6	16	9	3	17	1	2	17	5	17	8	3
23	15	4	15	8	15	11	3	16	3	2	16	7	2	16	11	1	17	3	17	7	17	10	3	18	2	18	10	1	19
24	16	0	16	4	16	8	17	0	17	4	17	8	18	0	18	4	18	8	19	0	19	4	19	8	20	0	20	4	20
25	16	8	17	0	17	4	2	17	8	2	18	0	3	18	5	18	9	19	1	19	5	2	19	9	20	1	20	5	21
26	17	4	17	8	2	18	0	3	18	5	18	9	2	19	1	3	19	6	19	10	2	20	3	20	7	20	11	2	21
27	18	0	18	4	2	18	9	19	1	2	19	6	19	10	2	20	3	20	7	21	0	21	4	2	21	8	22	0	22
28	18	8	19	0	3	19	5	2	19	10	2	20	3	20	7	2	21	0	21	4	3	21	9	2	22	1	22	5	23
29	19	4	19	9	20	1	3	20	6	2	20	11	2	21	4	1	21	9	22	6	3	22	11	2	23	1	23	4	24
30	20	0	20	5	20	10	2	1	21	3	21	8	22	1	22	6	22	11	23	4	23	9	2	24	2	24	7	25	1
31	20	8	21	1	1	21	6	2	21	11	2	22	4	3	22	10	23	3	23	8	1	2	24	11	3	25	5	25	10
32	21	4	21	9	2	22	2	3	22	8	23	1	2	23	6	3	24	0	24	5	2	24	10	3	25	9	26	3	26
33	22	0	22	5	2	22	11	2	23	4	2	23	10	2	24	9	2	25	2	2	25	8	7	27	0	27	6	27	11
34	22	8	23	1	3	23	7	2	24	1	24	6	3	25	0	2	25	6	25	11	3	26	4	3	27	10	28	4	28
35	23	4	23	10	24	3	3	24	9	2	25	3	2	25	9	1	26	3	26	9	27	2	2	28	8	28	1	29	8
36	24	0	24	6	25	0	2	25	6	2	26	0	2	26	6	27	0	28	0	28	6	29	0	29	6	30	0	30	0

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Pages.	31s.		31s.6d.		32s.		32s.6d.		33s.		33s.6d.		34s.		34s.6d.		35s.		35s.6d.		36s.		36s.6d.		37s.	
	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.
1	0	10	2	0	10	2	0	10	3	0	11	1	0	11	2	0	11	3	1	0	1	0	1	0	1	0
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3	2	7	2	2	8	3	2	8	2	2	9	2	2	10	2	2	11	2	2	11	3	3	0	3	3	0
4	3	5	2	3	6	3	3	7	2	3	8	3	3	9	2	3	10	3	3	11	2	4	0	4	0	3
5	4	4	3	4	4	2	4	6	1	4	7	4	4	8	3	4	10	2	4	11	1	5	0	5	1	1
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7	6	0	2	6	1	2	6	4	6	6	6	6	6	7	2	6	8	2	6	11	7	0	7	1	7	2
8	6	10	3	7	0	7	7	2	7	7	7	7	7	8	3	7	9	2	7	10	8	0	8	1	8	2
9	7	9	2	8	10	2	8	1	8	8	8	8	8	9	2	8	7	2	8	10	9	0	9	1	9	3
10	8	7	2	9	8	9	9	0	9	9	9	9	9	10	2	9	6	2	9	10	10	0	10	1	10	3
11	9	5	3	10	6	10	10	1	10	10	10	10	10	11	2	10	11	8	10	10	11	0	11	2	11	3
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15	12	11	13	1	2	14	14	13	14	14	14	14	14	15	4	14	14	7	14	9	15	0	15	2	15	5
16	13	9	2	14	0	15	15	14	15	15	15	15	15	16	5	15	15	6	15	9	16	0	16	2	16	5
17	14	7	3	15	10	16	16	15	16	16	16	16	16	17	6	16	16	6	16	9	17	0	17	3	17	5
18	15	6	15	9	16	0	16	3	16	16	16	16	17	0	17	3	17	6	17	9	18	0	18	3	18	6

EIGHTEENS.

Pages.	31s.		31s.6d.		32s.		32s.6d.		33s.		33s.6d.		34s.		34s.6d.		35s.		35s.6d.		36s.		36s.6d.		37s.	
	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.
19	16	4 2 16	7	2 16	10	3 17	2	17 5	17	8 1 17	11	2 18	2	2 18	2	2 18	18	5 3 18	9	19 0	19	3 1 19	3	1 19	s.	d. f.
20	17	2 3 17	6	17 9	2 18	0 3 18	4	18 4	18	7 2 18	10	3 19	2	2 18	2	2 18	19	5 2 19	8	3 20 0	20	3 2 20	0	20 3 2 20	6	3
21	18	1 18	4 2 18	8	18 11	2 19	3	19 3	19	6 2 19	10	2 20	1	2 19	20	1 2 20	20	5 2 20	5	20 8 2 21 0	21	3 2 21	0	21 3 2 21	7	2
22	18	11 2 19	3 19	6 3 19	5 2 20	9 1 21	1	21 5	20	5 3 20	9 2 21	1	2 21	1	2 21	22	4 3 21	8	2 22 0	22	3 3 22	7	2 22 3 3 22	7	2	
23	19	9 3 20	1 2 20	5 2 20	9 1 21	1	21 5	21	5 3 21	9 2 22	0 2 22	4 2 22	8	1 23 0	23	4 2 23	4	2 23 0	23	4 2 23	0	23 4 2 23	7	3		
24	20	8 2 21	0 2 21	4 2 21	8 2 22	0 2 22	4 2 22	22	4 2 22	8 2 23	0 2 23	4 2 23	8	2 24 0	24	4 2 24	4	2 24 0	24	4 2 24	0	24 4 2 24	8	2		
25	21	6 2 21	10 2 22	2 3 22	7 2 22	11 2 23	3 1 23	23	3 1 23	7 2 23	11 2 24	3 3 24	8	2 25 0	25	4 2 25	4	2 25 0	25	4 2 25	8	2 25 4 1 25	8	2		
26	22	4 3 22	9 2 23	1 2 23	5 3 23	10 2 24	2 2 24	24	2 2 24	6 3 24	11 2 25	3 3 25	7	3 26 0	26	4 2 26	3	3 26 0	26	4 2 26	8	3 26 4 2 26	8	3		
27	23	3 23	7 2 24	0 2 24	4 2 24	9 2 25	1 2 25	25	1 2 25	6 2 25	10 2 26	3 2 26	7	2 27 0	27	4 2 27	3	2 27 0	27	4 2 27	9	2 27 4 2 27	9	2		
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29	24	11 3 25	4 2 25	9 2 26	2 1 26	7 2 27	0 2 27	27	0 2 27	4 3 27	9 2 28	2 2 28	7	1 29 0	29	5 2 29	2	2 29 0	29	5 2 29	9	2 29 4 3 29	9	3		
30	25	10 2 26	3 2 26	8 2 27	1 2 27	6 2 28	5 2 28	28	5 2 28	4 2 28	9 2 29	3 3 29	7	2 30 0	30	5 2 30	2	2 30 0	30	5 2 30	10	2 30 4 3 30	10	2		
31	26	8 2 27	1 2 27	6 3 28	0 3 28	5 2 29	4 2 29	29	4 2 29	3 3 29	8 2 30	2 3 30	7	2 31 0	31	5 2 31	1	2 31 0	31	5 2 31	10	2 31 4 3 31	10	2		
32	27	6 3 28	0 2 28	5 2 28	10 3 29	4 2 29	9 2 30	3 3 30	8 2 31	2 3 31	7 2 32	1 3 32	7	2 33 0	33	5 2 33	1	2 33 0	33	5 2 33	11	2 33 4 3 33	11	2		
33	28	5 2 28	10 2 29	4 2 29	9 2 30	3 3 30	8 2 31	2 3 31	7 2 32	1 3 32	7 2 33	6 2 34	7	2 34 0	34	5 2 34	0	2 34 0	34	5 2 34	11	2 34 4 3 34	11	2		
34	29	3 2 29	9 2 30	2 3 30	8 2 31	2 3 31	7 2 32	1 3 32	7 2 33	6 2 34	7 2 35	6 2 36	6	1 35 0	35	5 2 35	0	2 35 0	35	5 2 35	11	2 35 4 3 35	11	2		
35	30	1 3 30	7 2 31	1 2 31	1 2 31	7 2 32	1 3 32	1 3 32	7 2 33	6 2 34	7 2 35	6 2 36	6	1 36 0	36	5 2 36	0	2 36 0	36	5 2 36	11	2 36 4 3 36	11	2		
36	31	0 3 31	6 2 32	0 3 32	0 3 32	6 2 33	0 3 33	0 3 33	6 2 34	7 2 35	6 2 36	6 2 37	6	1 37 0	37	5 2 37	0	2 37 0	37	5 2 37	11	2 37 4 3 37	11	2		

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Pages.	37s.6d.		38s.		38s.6d.		39s.		39s.6d.		40s.		40s.6d.		41s.		41s.6d.		42s.		42s.6d.		43s.		43s.6d.	
	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.	s.	d. f.
1	1	0 2	1	0 3	1	1 1	1	1 2	1	1 1	1	1 2	1	1 2	1	1 3	1	2 3	1	2 2	1	2 1	1	2 2	1	2 2
2	2	1 1	2	1 2	2	2 2	2	2 3	2	2 2	2	2 3	2	2 3	2	3 2	2	3 3	2	3 2	2	3 1	2	3 2	2	3 2
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6	6	3 3	6	4 4	6	7 7	6	8 8	6	7 7	6	8 8	6	9 9	6	10 10	6	11 11	6	0 0	6	1 1	6	2 2	6	3 3
7	7	3 2	7	4 3	7	8 1	7	9 2	7	8 1	7	9 2	7	10 2	7	11 3	7	12 4	7	0 0	7	1 1	7	2 2	7	3 3
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9	9	4 2	9	6 6	9	10 10	9	11 11	9	10 10	9	11 11	9	12 12	9	1 1	9	2 2	9	3 3	9	4 4	9	5 5	9	6 6
10	10	5 5	10	7 7	10	11 11	10	12 12	10	11 11	10	12 12	10	1 1	10	2 2	10	3 3	10	4 4	10	5 5	10	6 6	10	7 7
11	11	5 2	11	8 8	11	12 12	11	1 1	11	12 12	11	1 1	11	2 2	11	3 3	11	4 4	11	5 5	11	6 6	11	7 7	11	8 8
12	12	6 6	12	8 8	12	1 1	12	2 3	12	1 1	12	2 3	12	3 6	12	4 7	12	5 8	12	6 9	12	7 10	12	8 11	12	9 12
13	13	6 2	13	9 3	13	2 10	13	3 11	13	2 9	13	3 11	13	4 12	13	5 13	13	6 14	13	7 15	13	8 16	13	9 17	13	10 18
14	14	7 14	14	9 2	14	3 11	14	4 12	14	3 10	14	4 12	14	5 13	14	6 14	14	7 15	14	8 16	14	9 17	14	10 18	14	11 19
15	15	7 2	15	10 10	15	4 21	15	5 22	15	4 19	15	5 22	15	6 23	15	7 24	15	8 25	15	9 26	15	10 27	15	11 28	15	12 29
16	16	8 8	16	10 3	16	5 21	16	6 22	16	5 19	16	6 22	16	7 23	16	8 24	16	9 25	16	10 26	16	11 27	16	12 28	16	13 29
17	17	8 2	17	11 2	17	6 3	17	7 4	17	6 1	17	7 4	17	8 5	17	9 6	17	10 7	17	11 8	17	12 9	17	13 10	17	14 11
18	18	9 9	18	19 0	18	8 8	18	10 3	18	8 1	18	10 3	18	11 4	18	12 5	18	13 6	18	14 7	18	15 8	18	16 9	18	17 10

A Table, shewing the Number of Thousands in a Sheet of Eighteens, Twelves, Octavo, and Quarto, of various Sizes.

The large figures at the top denote the number of lines long; those in the first column the number of en's wide, and those having the *Italic letters e, t, o, q*, shew the number of thousands in a sheet of *eighteens, twelves, octavo, and quarto*.—When the odd numbers above the respective thousands in each sheet, amount to five hundred, another thousand is allowed; if less than five hundred they are not reckoned.

20		21		22		23		24		25		26	
18	13 ^e	19	14 ^e	20	16 ^e	21	17 ^e	22	19 ^e 13 ^t	23	21 ^e 14 ^t	24	22 ^e 15 ^t
19	14	20	15	21	17	22	18	23	20 13	24	22 14	25	23 16
20	14	21	16	22	17	23	19	24	21 14	25	23 15	26	24 16
21	15	22	17	23	18	24	20	25	22 14	26	23 16	27	25 17
22	16	23	17	24	19	25	21	26	22 15	27	24 16	28	26 17
23	17	24	18	25	20	26	22	27	23 16	28	25 17	29	27 18
24	17	25	19	26	21	27	22	28	24 16	29	26 17	30	28 19
25	18	26	20	27	21	28	23	29	25 17	30	27 18	31	29 19
27		28		29		30		31		32			
25	24 ^e 16 ^t	26	26 ^e 17 ^t	27	28 ^e 19 ^t	28	30 ^e 20 ^t	29	32 ^e 22 ^t	30	35 ^e 23 ^t		
26	25 17	27	27 18	28	29 19	29	31 21	30	33 22	31	36 24		
27	26 17	28	28 19	29	30 20	30	32 22	31	35 23	32	37 25		
28	27 18	29	29 19	30	31 21	31	33 22	32	36 24	33	38 25		
29	28 19	30	30 20	31	32 22	32	35 23	33	37 25	34	39 26		
30	29 19	31	31 21	32	33 22	33	36 24	34	38 25	35	40 27		
31	30 20	32	32 22	33	34 23	34	37 24	35	39 26	36	41 28		
32	31 21	33	33 22	34	35 24	35	38 25	36	40 27	37	43 28		
33		34		35		36							
31	37 ^e 25 ^t 16 ^o	32	39 ^e 26 ^t 17 ^o	33	42 ^e 28 ^t 18 ^o	34	44 ^e 29 ^t 20 ^o						
32	38 25 17	33	40 27 18	34	43 29 19	35	45 30 20						
33	39 26 17	34	42 28 18	35	44 29 20	36	47 31 21						
34	40 27 18	35	43 29 19	36	45 30 20	37	48 32 21						
35	42 28 18	36	44 29 20	37	47 31 21	38	49 33 22						
36	43 29 19	37	45 30 20	38	48 32 21	39	51 34 22						
37	44 29 20	38	47 31 21	39	49 33 22	40	52 35 23						
38	45 30 20	39	48 32 21	40	50 34 22	41	53 35 24						
37		38		39		40							
35	47 ^e 31 ^t 21 ^o	36	49 ^e 33 ^t 22 ^o	37	52 ^e 35 ^t 23 ^o	38	55 ^e 36 ^t 24 ^o						
36	48 32 21	37	51 34 22	38	53 36 24	39	56 37 25						
37	49 33 22	38	52 35 23	39	55 37 24	40	58 38 26						
38	51 34 22	39	53 36 24	40	56 37 25	41	59 39 26						
39	52 35 23	40	55 36 24	41	58 38 26	42	60 40 27						
40	53 36 24	41	56 37 25	42	59 39 26	43	62 41 28						
41	55 36 24	42	57 38 26	43	60 40 27	44	63 42 28						
42	56 37 25	43	59 39 26	44	62 41 27	45	65 43 29						

41			42			43			44		
39	58e	38t 26o	40	60e	40t 27o	41	63e	42t 28o	42	66e	44t 30o
40	59	39 26	41	62	41 28	42	65	43 29	43	68	45 30
41	61	40 27	42	64	42 28	43	67	44 30	44	69	46 31
42	62	41 28	43	65	43 29	44	68	45 30	45	71	48 32
43	63	42 28	44	67	44 30	45	70	46 31	46	73	49 32
44	65	43 29	45	68	45 30	46	71	47 32	47	74	50 33
45	66	44 30	46	70	46 31	47	73	49 32	48	76	51 34
4 6	68	45 30	47	71	47 32	48	74	50 33	49	77	52 34
45			46			47			48		
43	70e	46t 31o	44	73e	49t 32o	45	76e	51t 34o	46	79e	53t 35o 18q
44	71	48 32	45	75	50 33	46	78	52 35	47	81	54 36 18
45	73	49 32	46	76	51 34	47	80	53 35	48	83	55 37 18
46	75	50 33	47	78	52 35	48	81	54 36	49	85	56 38 19
47	76	51 34	48	79	53 35	49	83	55 37	50	86	58 39 19
48	78	52 35	49	81	54 36	50	85	56 38	51	88	59 39 20
49	79	53 35	50	83	55 37	51	86	58 38	52	90	60 40 20
50	81	54 36	51	84	56 38	52	88	59 39	53	92	61 41 20
49			50			51					
47	83e	55t 37o 18q	48	86e	58t 38o 19q	49	90e	60t 40o 20q			
48	85	56 38 19	49	88	59 39 20	50	92	61 41 20			
49	86	58 38 19	50	90	60 40 20	51	94	62 42 21			
50	88	59 39 20	51	92	61 41 20	52	95	64 42 21			
51	90	60 40 20	52	94	62 42 21	53	97	65 43 22			
52	92	61 41 20	53	95	64 42 21	54	99	66 44 22			
53	93	62 42 21	54	97	65 43 22	55	101	67 45 22			
54	95	64 42 21	55	99	66 44 22	56	103	69 46 23			
52			53			54					
50	94e	62t 42o 21q	51	97e	65t 42o 22q	52	101e	67t 45o 22q			
51	95	64 42 21	52	99	66 44 22	53	103	69 46 23			
52	97	65 43 22	53	101	67 45 22	54	105	70 47 23			
53	99	66 44 22	54	103	69 46 23	55	107	71 48 24			
54	101	67 45 22	55	105	70 47 23	56	109	73 48 24			
55	103	69 46 23	56	107	71 47 24	57	111	74 49 25			
56	105	70 47 23	57	109	73 48 24	58	113	75 50 25			
57	107	71 47 24	58	111	74 49 25	59	114	76 51 25			
55			56			57					
53	105e	70t 47o 23q	54	109e	73t 48o 24q	55	113e	75t 50o 25q			
54	107	71 48 24	55	111	74 49 25	56	115	77 51 26			
55	109	73 48 24	56	113	75 50 25	57	117	78 52 26			
56	111	74 49 25	57	115	77 51 26	58	119	79 53 26			
57	113	75 50 25	58	117	78 52 26	59	121	81 54 27			
58	115	77 51 26	59	119	79 53 26	60	123	82 55 27			
59	117	78 52 26	60	121	81 54 27	61	125	83 56 28			
60	119	79 53 26	61	123	82 55 27	62	127	85 57 28			

58			59			60		
56	117e	78t 52o 26q	57	121e	81t 54o 27q	58	125e	84t 56o 28q
57	119	79 53 26	58	123	82 55 27	59	127	85 57 28
58	121	81 54 27	59	125	84 56 28	60	130	86 58 29
59	123	82 55 27	60	127	85 57 28	61	132	88 59 29
60	125	84 56 28	61	130	86 58 29	62	134	89 60 30
61	127	85 57 28	62	132	88 59 29	63	136	91 60 30
62	129	86 58 29	63	134	89 59 30	64	138	92 61 31
63	131	88 58 29	64	136	91 60 30	65	140	94 62 31
61			62			63		
59	130e	86t 58o 29q	60	134e	89t 60o 30q	61	138e	92t 61o 31q
60	132	88 59 29	61	136	91 61 30	62	141	94 62 31
61	134	89 60 30	62	138	92 62 31	63	143	95 64 32
62	136	91 61 30	63	141	94 62 31	64	145	97 65 32
63	138	92 61 31	64	143	95 63 32	65	147	98 66 33
64	141	94 62 31	65	145	97 64 32	66	150	100 67 33
65	143	95 63 32	66	147	98 65 33	67	152	101 68 34
66	145	97 64 32	67	150	100 66 33	68	154	103 69 34
64			65			66		
62	143e	95t 63o 32q	63	147e	98t 66o 33q	64	152e	101t 68o 34q
63	145	97 65 32	64	150	100 67 33	65	154	103 69 34
64	147	98 66 33	65	152	101 68 34	66	157	105 70 35
65	150	100 67 33	66	154	103 69 34	67	159	106 71 35
66	152	101 68 34	67	157	105 70 35	68	162	108 72 36
67	154	103 69 34	68	159	106 71 35	69	164	109 73 36
68	157	104 70 35	69	161	108 72 36	70	166	111 74 37
69	159	106 71 35	70	164	109 73 36	71	169	112 75 37
67			68			69		
65	157e	105t 70o 35q	66	162e	108t 72o 36q	67	166e	111t 74o 37q
66	159	106 71 35	67	164	109 73 36	68	169	113 75 38
67	162	108 72 36	68	166	111 74 37	69	171	114 76 38
68	164	109 73 36	69	169	113 75 38	70	174	116 77 39
69	166	111 74 37	70	171	114 76 38	71	176	118 78 39
70	169	113 75 38	71	174	116 77 39	72	179	119 79 40
71	171	114 76 38	72	176	118 78 39	73	181	121 81 40
72	174	116 77 39	73	179	119 80 40	74	184	123 82 41
70			71			72		
68	171e	114t 76o 38q	69	176e	118t 78o 39q	70	181e	121t 81o 40q
69	174	116 77 39	70	179	119 80 40	71	184	123 82 41
70	176	118 78 39	71	181	121 81 40	72	187	124 83 41
71	179	119 80 40	72	184	123 82 41	73	189	126 84 42
72	181	121 81 40	73	187	124 83 41	74	192	128 85 43
73	184	123 82 41	74	189	126 84 42	75	194	130 86 43
74	186	124 83 41	75	192	128 85 43	76	197	131 88 44
75	189	126 84 42	76	194	130 86 43	77	200	133 89 44

73		74		75		76	
71	124t 83o 41g	72	128t 85o 43g	73	131t 88o 44g	74	135t 90o 45g
72	126 84 42	73	130 86 43	74	133 89 44	75	137 91 46
73	128 85 43	74	131 88 44	75	135 90 45	76	139 92 46
74	130 86 43	75	133 89 44	76	137 91 46	77	140 94 47
75	131 88 44	76	135 90 45	77	139 92 46	78	142 95 47
76	133 89 44	77	137 91 46	78	140 94 47	79	144 96 48
77	135 90 45	78	139 92 46	79	142 95 47	80	146 97 49
78	137 91 46	79	140 94 47	80	144 96 48	81	148 98 40
77		78		79		80	
75	139t 92o 46g	76	142t 95o 47g	77	146t 97o 49g	78	150t 100o 50g
76	140 94 47	77	144 96 48	78	148 99 49	79	152 101 51
77	142 95 47	78	146 97 49	79	150 100 50	80	154 102 51
78	144 96 48	79	148 99 49	80	152 101 51	81	156 104 52
79	146 97 49	80	150 100 50	81	154 102 51	82	157 105 52
80	148 99 49	81	152 101 51	82	155 104 52	83	159 106 53
81	150 100 50	82	154 102 51	83	157 105 52	84	161 108 54
82	152 101 51	83	155 104 52	84	159 106 53	85	163 109 54
81		82		83		84	
79	154t 102o 51g	80	157t 105o 52g	81	161t 108o 54g	82	165t 110o 55g
80	156 104 52	81	159 106 53	82	163 109 54	83	167 112 56
81	157 105 52	82	161 108 54	83	165 110 55	84	169 113 56
82	159 106 53	83	163 109 54	84	167 112 56	85	171 114 57
83	161 108 54	84	165 110 55	85	169 113 56	86	173 116 58
84	163 109 54	85	167 112 56	86	171 114 57	87	175 117 58
85	165 110 55	86	169 113 56	87	173 116 58	88	177 118 59
86	167 111 56	87	171 114 57	88	175 117 58	89	179 120 60
85		86		87		88	
83	169t 113o 56g	84	173t 116o 58g	85	118o 59g	86	121o 61g
84	171 114 57	85	175 117 58	86	120 60	87	122 61
85	173 116 58	86	178 118 59	87	121 61	88	124 62
86	175 117 58	87	180 120 60	88	122 61	89	125 63
87	177 118 59	88	182 121 61	89	124 62	90	127 63
88	180 120 60	89	184 122 61	90	125 63	91	128 64
89	182 121 61	90	186 124 62	91	127 63	92	130 65
90	184 122 61	91	188 125 63	92	128 64	93	131 65
85		86		87		88	
83	169t 113o 56g	84	173t 116o 58g	85	118o 59g	86	121o 61g
84	171 114 57	85	175 117 58	86	120 60	87	122 61
85	173 116 58	86	178 118 59	87	121 61	88	124 62
86	175 117 58	87	180 120 60	88	122 61	89	125 63
87	177 118 59	88	182 121 61	89	124 62	90	127 63
88	180 120 60	89	184 122 61	90	125 63	91	128 64
89	182 121 61	90	186 124 62	91	127 63	92	130 65
90	184 122 61	91	188 125 63	92	128 64	93	131 65
90		91		92		93	
88	127o 63g	89	130o 65g	90	132o 66g	91	135o 68g
89	128 64	90	131 66	91	134 67	92	137 68
90	130 65	91	132 66	92	135 68	93	138 69
91	131 66	92	134 67	93	137 68	94	140 70
92	132 66	93	135 68	94	138 69	95	141 71
93	134 67	94	137 68	95	140 70	96	143 71
94	135 68	95	138 69	96	141 71	97	144 72
95	137 68	96	140 70	97	143 71	98	146 73
90		91		92		93	
88	127o 63g	89	130o 65g	90	132o 66g	91	135o 68g
89	128 64	90	131 66	91	134 67	92	137 68
90	130 65	91	132 66	92	135 68	93	138 69
91	131 66	92	134 67	93	137 68	94	140 70
92	132 66	93	135 68	94	138 69	95	141 71
93	134 67	94	137 68	95	140 70	96	143 71
94	135 68	95	138 69	96	141 71	97	144 72
95	137 68	96	140 70	97	143 71	98	146 73
96	140 70	97	143 71	98	146 73	99	149 74
97	143 71	98	146 73	99	149 74	100	152 76

A Table, shewing the Price of any Number of Letters, from 16,000 to 100,000, at 5½d. 5¼d. 5¾d. 6d. 6¼d. 7d. 7½d. and 8d. per Thousand.

Th.	5½d.			5¼d.			5¾d.			6d.		6¼d.			7d.		7½d.			8d.	
	s.	d.	f.	s.	d.	f.	s.	d.	f.	s.	d.	s.	d.	f.	s.	d.	s.	d.	f.	s.	d.
17	7	5	1	7	9	2	8	1	3	8	6	8	10	1	9	11	10	7	2	11	4
18	7	10	2	8	3		8	7	2	9	0	9	4	2	10	6	11	3		12	0
19	8	3	3	8	8	2	9	1	1	9	6	9	10	3	11	1	11	10	2	12	8
20	8	9		9	2		9	7		10	0	10	5		11	8	12	6		13	4
21	9	2	1	9	7	2	10	0	3	10	6	10	11	1	12	3	13	1	2	14	0
22	9	7	2	10	1		10	6	2	11	0	11	5	2	12	10	13	9		14	8
23	10	0	3	10	6	2	11	0	1	11	6	11	11	3	13	5	14	4	2	15	4
24	10	6		11	0		11	6		12	0	12	6		14	0	15	0		16	0
25	10	11	1	11	5	2	11	11	3	12	6	13	0	1	14	7	15	7	2	16	8
26	11	4	2	11	11		12	5	2	13	0	13	6	2	15	2	16	3		17	4
27	11	9	3	12	4	2	12	11	1	13	6	14	0	3	15	9	16	10	2	18	0
28	12	3		12	10		13	5		14	0	14	7		16	4	17	6		18	8
29	12	8	1	13	3	2	13	10	3	14	6	15	1	1	16	11	18	1	2	19	4
30	13	1	2	13	9		14	4	2	15	0	15	7	2	17	6	18	9		20	0
31	13	6	3	14	2	2	14	10	1	15	6	16	1	3	18	1	19	4	2	20	8
32	14	0		14	8		15	4		16	0	16	8		18	8	20	0		21	4
33	14	5	1	15	1	2	15	9	3	16	6	17	2	1	19	3	20	7	2	22	0
34	14	10	2	15	7		16	3	2	17	0	17	8	2	19	10	21	3		22	8
35	15	3	3	16	0	2	16	9	1	17	6	18	2	3	20	5	21	10	2	23	4
36	15	9		16	6		17	3		18	0	18	9		21	0	22	6		24	0
37	16	2	1	16	11	2	17	8	3	18	6	19	3	1	21	7	23	1	2	24	8
38	16	7	2	17	5		18	2	2	19	0	19	9	2	22	2	23	9		25	4
39	17	0	3	17	10	2	18	8	1	19	6	20	3	3	22	9	24	4	2	26	0
40	17	6		18	4		19	2		20	0	20	10		23	4	25	0		26	8
41	17	11	1	18	9	2	19	7	3	20	6	21	4	1	23	11	25	7	2	27	4
42	18	4	2	19	3		20	1	2	21	0	21	10	2	24	6	26	3		28	0
43	18	9	3	19	8	2	20	7	1	21	6	22	4	3	25	1	26	10	2	28	8
44	19	3		20	2		21	1		22	0	22	11		25	8	27	6		29	4
45	19	8	1	20	7	2	21	6	3	22	6	23	5	1	26	3	28	1	2	30	0
46	20	1	2	21	1		22	0	2	23	0	23	11	2	26	10	28	9		30	8
47	20	6	3	21	6	2	22	6	1	23	6	24	5	3	27	5	29	4	2	31	4
48	20	1		22	0		23	0		24	0	25	0		28	0	30	0		32	0
49	21	5	1	22	5	2	23	5	3	24	6	25	6	1	28	7	30	7	2	32	8
50	21	10	2	22	11		23	11	2	25	0	26	0	2	29	2	31	3		33	4
51	22	3	3	23	4	2	24	5	1	25	6	26	6	3	29	9	31	10	2	34	0
52	22	9		23	10		24	11		26	0	27	1		30	4	32	6		34	8

A Table, &c. continued.

Th.	5¼d.			5½d.			5¾d.			6d.		6¼d.			7d.		7½d.			8d.	
	s.	d.	f.	s.	d.	f.	s.	d.	f.	s.	d.	s.	d.	f.	s.	d.	s.	d.	f.	s.	d.
53	23	2	1	24	3	2	25	4	3	26	6	27	7	1	30	11	33	1	2	35	4
54	23	7	2	24	9		25	10	2	27	0	28	1	2	31	6	33	9		86	0
55	24	0	3	25	2	2	26	4	1	27	6	28	7	3	32	1	34	4	2	36	8
56	24	6		25	8		26	10		28	0	29	2		32	8	35	0		37	4
57	24	11	1	26	1	2	27	3	3	28	6	29	8	1	33	3	35	7	2	38	0
58	25	4	2	26	7		27	9	2	29	0	30	2	2	33	10	36	3		38	8
59	25	9	3	27	0	2	28	3	1	29	6	30	8	3	34	5	36	10	2	39	4
60	26	3		27	6		28	9		30	0	31	3		35	0	37	6		40	0
61	26	8	1	27	11	2	29	2	3	30	6	31	9	1	35	7	38	1	2	40	8
62	27	1	2	28	5		29	8	2	31	0	32	3	2	36	2	38	9		41	4
63	27	6	3	28	10	2	30	2	1	31	6	32	9	3	36	9	39	4	2	42	0
64	28	0		29	4		30	8		32	0	33	4		37	4	40	0		42	8
65	28	5	1	29	9	2	31	1	3	32	6	33	10	1	37	11	40	7	2	43	4
66	28	10	2	30	3		31	7	2	33	0	34	4	2	38	6	41	3		44	0
67	29	3	3	30	8	2	32	1	1	33	6	34	10	3	39	1	41	10	2	44	8
68	29	9		31	2		32	7		34	0	35	5		39	8	42	6		45	4
69	30	2	1	31	7	2	33	0	3	34	6	35	11	1	40	3	43	1	2	46	0
70	30	7	2	32	1		33	6	2	35	0	36	5	2	40	10	43	9		46	8
71	31	0	3	32	6	2	34	0	1	35	6	36	11	3	41	5	44	4	2	47	4
72	31	6		33	0		34	6		36	0	37	6		42	0	45	0		48	0
73	31	11	1	33	5	2	34	11	3	36	6	38	0	1	42	7	45	7	2	48	8
74	32	4	2	33	11		35	5	2	37	0	38	6	2	43	2	46	3		49	4
75	32	9	3	34	4	2	35	11	1	37	6	39	0	3	43	9	46	10	2	50	0
76	33	3		34	10		36	5		38	0	39	7		44	4	47	6		50	8
77	33	8	1	35	3	2	36	10	3	38	6	40	1	1	44	11	48	1	2	51	4
78	34	1	2	35	9		37	4	2	39	0	40	7	2	45	6	48	9		52	0
79	34	6	3	36	2	2	37	10	1	39	6	41	1	3	46	1	49	4	2	52	8
80	35	0		36	8		38	4		40	0	41	8		46	8	50	0		53	4
81	35	5	1	37	1	2	38	9	3	40	6	42	2	1	47	3	50	7	2	54	0
82	35	10	2	37	7		39	3	2	41	0	42	8	2	47	10	51	3		54	8
83	36	3	3	38	0	2	39	9	1	41	6	43	2	3	48	5	51	10	2	55	4
84	36	9		38	6		40	3		42	0	43	9		49	0	52	6		56	0
85	37	2	1	38	11	2	40	8	3	42	6	44	3	1	49	7	53	1	2	56	8
86	37	7	2	39	5		41	2	2	43	0	44	9	2	50	2	53	9		57	4
87	38	0	3	39	10	2	41	8	1	43	6	45	3	3	50	9	54	4	2	58	0
88	38	6		40	4		42	2		44	0	45	10		51	4	55	0		58	8
89	38	11	1	40	9	2	42	7	3	44	6	46	4	1	51	11	55	7	2	59	4
90	39	4	2	41	3		43	1	2	45	0	46	10	2	52	6	56	3		60	0
91	39	9	3	41	8	2	43	7	1	45	6	47	4	3	53	1	56	10	2	60	8
92	40	3		42	2		44	1		46	0	47	11		53	8	57	6		61	4
93	40	8	1	42	7	2	44	6	3	46	6	48	5	1	54	3	58	1	2	62	0
94	41	1	2	43	1		45	0	2	47	0	48	11	2	54	10	58	9		62	8
95	41	6	3	43	6	2	45	6	1	47	6	49	5	3	55	5	59	4	2	63	4
96	42	0		44	0		46	0		48	0	50	0		56	0	60	0		64	0
97	42	5	1	44	5	2	46	5	3	48	6	50	6	1	56	7	60	7	2	64	8
98	42	10	2	44	11		46	11	2	49	0	51	0	2	57	2	61	3		65	4
99	43	3	3	45	4	2	47	5	1	49	6	51	6	3	57	9	61	10	2	66	0
100	43	9		45	10		47	11		50	0	52	1		58	4	62	6		66	8

The following Plan of a Pair of Cases was made by the late ingenious Mr. Hazard, of Bath. This arrangement of the Sorts would, no doubt, save considerable time to the Compositor.

Upper Case.

â	ê	î	ô	û	¶	§	ä	ë	ï	ö	ü		Œ
á	é	í	ó	ú	†	‡	Rules.					[	)
à	è	ì	ò	ù		*	æ	œ	&	ff	ff	ç	!
A	B	C	D	E	F	G	A	B	C	D	E	F	G
H	I	K	L	M	N	O	H	I	K	L	M	N	O
P	Q	R	S	T	V	W	P	Q	R	S	T	V	W
X	Y	Z	Æ	Œ	U	J	X	Y	Z	Æ	Œ	U	J

APPENDIX.

No. I.

ON THE BEST MEANS OF EXPEDITING PAMPHLETS AND OTHER WORKS OF A TEMPORARY AND URGENT NATURE.

TO concentrate as much as possible the employment of workmen in every kind of business, is the best and only means of acquiring expedition and dispatch. This observation applies very forcibly to the printing business. Pamphlets, and other works of a temporary nature, it is sometimes necessary to print in the course of a few hours; to accomplish this the utmost exertion, accompanied with skilful management, is requisite; we shall, therefore, lay down a plan which we conceive will be found fully to answer this purpose.

As soon as a work of this nature is put in hand, it must be the business of the overseer to select such men as are able to go through a considerable quantity of work

in a given time. We will suppose eight men are ordered to distribute letter for it. Their first concern must be to appoint one from among them who thoroughly understands his business, and is in other respects qualified to undertake the management of the work, to make it up and to do every thing which interferes with the regular business of distributing, composing, and correcting.

Having done this, they proceed to the distribution of their letter ; and the *clicker*, (the person so appointed), applies to the overseer for the copy, receives instructions respecting it, and procures leads and every other necessary sort. He then draws out the following table :

Compositors' Names.	Folios of Copy.	Lines compos.	Memorandums.

In the first column he sets down the name of each compositor when he takes copy ; and, in the second, the folio of the copy, that he may be able to ascertain instantly in whose hands it lies. In the third column he notes down the number of lines each man has composed, opposite to his name, as fast as the galleys are brought to him. In the fourth, he sets down such remarks respecting the copy, &c. as may be necessary, and also any circumstance that may occur in the companionship.

By this means each compositor will receive a share of the amount, according to the number of lines he composes, and the clicker must have an equal share with the person who sets the greatest quantity : or it may be done by limiting the quantity each man is to compose

in an hour; whoever is deficient in this quantity must suffer a proportionate deduction from his share of the work.

When the companionship are ready for their first taking of copy, they are to receive it from the clicker in pieces as short as possible, taking care that the two first have shorter takings than either of the others, to prevent as much as possible, any delay in the making up. During the time the first taking is in hand, the clicker sets the half-head, head lines, white lines, and signature lines, together with notes (if few), and other extraneous matter.

As soon as the first person brings him his matter, he counts off the number of lines, and inserts them in the table; then gives him another taking of copy, and proceeds with the making up. The same plan is observed with the rest of the companionship.

When the first sheet is made up, he lays the pages on the stone, and informs the overseer of it, who will then immediately procure chases and furniture.

The work will now proceed rapidly, provided the compositors stick close to their business, and there be no hindrance with respect to letter, &c. which depends on the good management of the overseer. If the clicker find that he cannot make up the matter as fast as it is composed, he should call one of the compositors to his assistance, who must be the person last in copy. In this case he counts the lines he has composed, sets them down in the table, and takes notice of the time he is off, which is to be made up to him by a deduction from the share of each person.

The proofs should be read immediately after they are pulled, and given to the clicker to be corrected. As soon as this is done, he lays up the forms, and gives the proof to the compositor, whose matter stands first, who should immediately correct it, then forward it to the next,

and so on, till the sheet be corrected; the clicker then locks it up, and carries the forms to the proof press.

As soon as one of the companionship is out of copy, and there is no more to give out, the lines of the whole must be counted off, and set down in the table, which closes the account, and then every one does as much as he can, for the general benefit. If there be not work enough to employ the whole, those who are not wanted may go to their regular work, and the time of their absence, till the rest of the companionship return to theirs, be deducted from their respective shares.

It would save time in making calculations, could the companionship agree to divide the amount of the bill between them in equal proportions, and merely fine those who absent themselves from the office; but as some compositors will set considerably more than others, the above mode will, we conceive, be found to answer best, as it excites a spirit of emulation, and induces them to pursue their work with vigour.

No. II.

RULES TO BE OBSERVED IN COMPANIONSHIPS.

The disputes which frequently arise in printing-offices upon trifling as well as intricate points, can only be settled by a reference to the general custom and usage of the trade. These misunderstandings, which annoy and retard business, often take place in companionships consisting of three or four compositors; it is therefore

highly desirable that the generally received rules and regulations on this subject should be explicitly and clearly laid down for the future comfort and government of the compositor.

Taking Copy.

If printed copy, and the compositor is desired to follow page for page, each sheet, as it is given out, should be divided into as many parts as the companionship may consist of, and the choice of each part, if it materially varies, should be thrown for. During the absence of either of the companionship, if he be likely soon to return, some one should throw for him, on condition that he will be able to get through this fresh taking, with what remains of the last, so as not to impede the imposition of the sheet.

Another method may be adopted, viz. for each person to agree to receive regularly of the different takings a certain number of pages ; but if this plan be followed, the bulk of the copy must not be subject to the inspection of the companionship, but kept by the overseer, and dealt out by him as it is wanted, or it will inevitably cause contention ; for the compositor likely to be first out of copy, if he has free access to that which remains unfinished, will observe whether the next taking be *fat* or *lean*—if the latter, he will hold back and loiter away his time, in order to avoid it, and thus materially delay the work. On the other hand, if this taking appear to be advantageous, and there should happen to be two or three of the companionship out of copy at the same time, a sort of scramble will take place who shall have it, which will end in dispute and confusion ;—on no account, therefore, should the copy be open to examination, unless for the purpose of ascertaining the charge per sheet.

With manuscript copy it will be better to take one from the other in such a manner as not in the smallest degree to delay the imposition, or block up the letter ; that is, that no compositor may retain the making up too long by holding too large a taking of copy. Compositors are apt to grasp at a large portion of copy, with the view of advantage in the making up, though nine times in ten it will, as before observed, operate as a loss to them, by their eventually standing still for want of letter. If by mistake too much copy has been taken, the compositor should hand a part of it to the person next in the making up, to set up to himself.

If parts of the copy should be particularly advantageous or otherwise, each of the companionship should throw for the chance of it : the person to whom it may fall, if he have copy in hand must turn that copy over to him who is about to receive more copy ; but for trifling variations from the general state of the copy, it cannot be worth the loss of time necessary to contest it ; though it frequently happens that a litigious man will argue half an hour on a point that would not have made five minutes' difference to him in the course of his day's work.

If one of the companionship absent himself from business, and thereby delays the making up, and there is the smallest probability of standing still for letter, the person who has the last taking must go on with this man's copy, whether it be good or bad.

Making up of Letter.

The number of the companionship, if possible, should always be determined on at the commencement of the work, that they may all proceed upon an equal footing. It

should be well ascertained that the letter appropriated for the work will be adequate to keep the persons on it fully employed.

If any part of the matter for distribution, whether in chase or in paper, be desirable or otherwise, for the sorts it may contain, it should be divided equally, or the choice of it thrown for.

When a new companion is put on the work after the respective shares of letter are made up, and if there be not a sufficiency to carry on all the companionship without making up more, he must make up an additional quantity before he can be allowed to partake of any part of that which comes from the press.

Making up Furniture.

Two of the companionship who may have the greatest proportion of the first sheet, should make up the furniture for that sheet; and though it may be thought that a disadvantage will be felt in making up the first sheet, they having to ascertain the right margin, yet, properly considered, this disadvantage is sufficiently balanced by their not being likely to meet with a scarcity of furniture, which will frequently occur after several sheets are made up. The other companions in rotation, as their matter is made up, will take an equal share of the furniture. Should an odd sheet be wanted, it will be better to throw for the chance of making it up.

Imposing and distributing Letter.

The person to whose turn it falls to impose, must lay up the form for distribution; but as continual disputes arise on this subject, and as it can only be ascertained by

comparing the number of pages composed, with the number put in chase by each person, we therefore recommend their keeping an exact account of these pages, which had better be done agreeable to the following plan :

Signatures.	Compositors' Names.							By whom imposed.
B								
C								
D								
E								
F								
G								
H								

This scale should always be kept by the compositor in the making up ; who, when he gives it away to the person that follows him, marks down the number of pages he has made up opposite to the proper signature, and under his own name : also when he imposes, he inserts his name in the column appropriated for that purpose. By following strictly this mode, every sort of dispute will be prevented : and though a private account may be necessary for individual satisfaction, yet it will not avail in settling a general misunderstanding, as the various private accounts may differ, and the charge of inaccuracy may be alleged with as much reason against one as the other ; but in this general scale a mistake can be immediately

detected. It also operates as a check on those who may be inclined to write out of their proper signature, or to charge more pages than they have imposed.

As the letter is laid up it should be divided in equal proportions ; and, if it can be so managed, each person had better distribute the matter originally composed by him ; for by this means the sorts which have made his case uneven will again return to him.

It may happen, from one of the companionship absenting himself, that his former share of letter remains undistributed at a time a second division is taking place ; under these circumstances, he must not be included in this division. In the event of a scarcity of letter, if any man absent himself beyond a reasonable time, his undistributed matter should be divided equally among his companions, and when he returns, he may then have his share of the next division.

Correcting.

The compositor, whose matter is in the first part of the proof, lays up the forms on the imposing stone, and corrects. He then hands the proof to the person who has the following matter. The compositor who corrects the last part of the sheet locks up the forms.

The compositor having matter in the first and last part, but not the middle of the sheet, only lays up the form and corrects his matter ; the locking up is left to the person who corrects last in the sheet.

A compositor having the first page only of the sheet, is required to lay up one form ; also to lock up one form if he has only the last page.

If from carelessness in locking up the form—viz. the

furniture binding, the quoins badly fitted, &c.—any letters or even a page should fall out, the person who has thus locked up the form must immediately repair the damage. But if from bad justification, or in leaded matter the letters *ride* upon the ends of the leads, the loss attending any accident from this circumstance must fall upon the person to whom the matter belongs.

It is the business of the person who locks up the form, to ascertain whether all the pages are of an equal length ; and though a defect in this respect is highly reprehensible in the person to whom it attaches, (whose duty it is to rectify it), yet if not previously discovered by the locker-up, and an accident happen, he must make good the defect.

The compositor who imposes a sheet must correct the chargeable proof of that sheet, which is also generally at the same time corrected for press, and take it to the ready place. He must also rectify any defect in the register, arising from the want of accuracy in the furniture.

Forms will sometimes remain a considerable length of time before they are put to press. When this happens, and particularly in the summer, the furniture is liable to shrink, and the pages will, in consequence, if care be not taken, fall out ; it is therefore the business of the person who has locked up the form, to attend to it in this respect, or he will be subject to make good any accident which his neglect may occasion.

When forms are wrought off, and ordered to be kept standing, they are then considered under the care of the overseer. When they are desired to be cleared away, it is done in equal proportions by the companionship. During the time any forms may have remained under the care of the overseer, should there have been any alteration as to form or substance, such alterations not having been made

by the original compositors, they are not subject to clear away those parts of the form that were altered.

If the pressmen unlock a form on the press, and from carelessness in the locking up any part of it fall out, they are subject to the loss that may happen in consequence.

The compositor who locks up a sheet takes it to the proof press, and the pressman, after he has pulled the proof, puts by the forms in the place appointed for that purpose.

Transposition of Pages.

Each person in the companionship must lay down his pages properly on the stone for imposition. The compositor, whose turn it is to impose, looks them over to see if they are rightly placed ; should they, after this examination, lay improperly, and be thus imposed, it will be his business to transpose them ; but should the folios be wrong, and the mistake arise from this inaccuracy, it must be rectified by the person to whom the matter belongs. Pages being laid down for imposition, without folios or head lines, must be rectified by the person who has been slovenly enough to adopt this plan.



No. III.

ON STEREOTYPE PRINTING.

We have been favoured with the following interesting account of the invention and progress of stereotype printing, by Alexander Tilloch, Esq. the learned and

ingenious editor of the *Philosophical Magazine*, and which appeared in the tenth volume of that valuable work.

“ Had I listened to the solicitations of friends, I should long before this time have published some account of an art, to the advancement of which I had in some degree contributed, and in which I may affirm I was tolerably proficient upwards of twenty years ago : I might add, that the idea was truly my own—for such was the fact—but in perfecting the invention, I had the assistance and joint labour of another. At the time of the discovery, I flattered myself that we were original ; and, with those sanguine ideas which are natural to a young man, indulged the hopes of reaping some fame, at least, from the discovery ; nay, I was even weak enough to feel vexed when I afterwards found that we had been anticipated by a Mr. Ged, of Edinburgh, who had printed books from letter-press plates, about *fifty years before !* The knowledge of this fact lessened the value of the discovery so much in my estimation, that I felt but little anxiety to be known as a second inventor ; and, but for the persevering attempts of others to deprive Ged of the fame his memory so justly merits, and which he dearly earned, I might have still remained silent.”

Mr. Tilloch then briefly enumerates the progressive steps of improvement which has taken place in the typographic art, and observes, that “ it is a curious fact, that all the improvements followed each other in such quick succession, that in a few years from its first invention in Europe, we find the printers in possession of all our common modes of working, and producing specimens of their art, which even now cannot be surpassed. Some of the early printed missals, upon vellum, are proofs of this,

“ But if we have reason to be surprised at the quick steps by which printing with moveable types was per-

fect, we have more cause to wonder why, with the acquisition of moveable types, the art became stationary. The transition from solid pages, cut at an expense and labour beyond the value of the interest of any capital that could be required to be sunk in printing an edition of any work, made it a desirable object to devise means for making the same letters do over and over, not only for different sheets in succession of the same work, but for subsequent publications. Hence came the first moveable types; which, however, as we have already observed, were all cut singly. The success which followed the attempts made to lessen this labour of cutting, by making well-formed letters once cut, serve for ever, by the facility of multiplication, which founding afforded, ought, one would think, instantly to have led to a further improvement. If founding could be applied to single letters, why not to pages, to get rid of a sacrifice of capital submitted to at first, because of the enormous expense of block-cutting! Founding of pages, on the first view of it, promises many advantages in point of economy; and to science it holds out what can never otherwise be obtained—the possibility of procuring, in a short time, *immaculate editions*! From books cast into solid pages, no more copies would be printed than might be wanted for immediate sale; the money thus saved from being sunk in paper to be piled up in warehouses for years, as at present, would serve as surplus capital to print other works; and thus the printer, his workmen, and the booksellers, would all be benefited; (for it would be easy to prove, did our present limits allow it, that not only the business of the pressmen, but of the compositors, would be materially benefited and increased by the general adoption of such an improvement), and all errors, as soon as discovered, could be rectified in the plates, to

prevent them from appearing in after copies, instead of running through a large edition, as at present.

“ Such considerations as I have just stated first led me to turn my thoughts to the improvement of the art of printing; and the more I thought upon it, the more I became convinced of its practicability. I communicated my ideas upon the subject to Mr. Foulis, printer to the University of Glasgow, my native city, and where I then resided, who furnished me with a page of types ready set up, or composed, for my first experiment, which had sufficient success to induce me to try others, and convinced Mr. Foulis of the possibility of producing plates, which would yield impressions not to be distinguished from those taken from types.

“ If I had seen some of the advantages which such a plan promised, Mr. Foulis saw and pointed out many more, of such a nature as could only present themselves to a regular bred practical printer. We agreed to prosecute the business together, and, if possible, to bring it to perfection, and in pursuance of this resolution performed, I may say, innumerable experiments, till we at last overcame every difficulty, and were able to produce plates, the impressions from which could not be distinguished from those taken from the types from which they were cast.

“ In the mean time we learnt that our art, or one extremely similar, had been practised many years before by Mr. Ged, as I have before observed; and soon after, the world was favoured, by Mr. Nichols, with an interesting pamphlet entitled ‘ Biographical Memoirs of William Ged; including a particular account of his progress in the art of block-printing*.’ The first part of the pam-

phlet, as the editor informs us, was printed from an MS. dictated by Ged some time before his death ; the second part was written by his daughter, for whose benefit the profits of the publication were intended ; the third was a copy of proposals that had been published by Mr. Ged's son in 1751, for reviving his father's art ; and to the whole was added Mr. Mores's narrative of block-printing.

“ From this publication it appears, that so far back as the year 1725, Mr. Ged had begun to prosecute plate-making. In 1727 he entered into a contract with a person who had a little capital, but who, on conversing with some printer, got so intimidated, that at the end of two years he had laid out only twenty-two pounds. In 1729 he entered into a new contract with a Mr. Fenner, Thomas James a type-founder, and John James the architect, and some time after, a privilege was obtained from the University of Cambridge to print bibles and prayer-books. But it appears that one of his partners was actually averse to the success of the plan, and engaged such people for the work as he thought most likely to spoil it. A straggling workman who had wrought there, informed Mr. Mores, that both bibles and common prayer-books had been printed, but that the compositors, when they corrected one fault, made purposely half a dozen more, and the pressmen, when the masters were absent, battered the letter in aid of the compositors. In consequence of these base proceedings, the books were suppressed by authority, and the plates sent to the King's printing-house, and from thence to Mr. Caslon's foundery.’

“ After much ill usage, Ged, who appears to have been a person of great honesty and simplicity, returned to Edinburgh. His friends were anxious that a specimen of his art should be published, which was at last done by sub-

scription. His son, James Ged, who had been apprenticed to a printer, with the consent of his master set up the forms in the night-time, when the other compositors were gone, for his father to cast the plates from ; by which means Sallust was finished in 1736. Of this work I have a copy, and, which is more singular, the plate of one of the pages. This plate I first saw in the hands of the deceased Mr. John Murray, bookseller, in the year 1782, but do not now recollect the way in which he said it came into his possession. Having about a year ago applied to his successors in business, Messrs. Murray and Highley, to request, if the plate could be found, that I might be allowed to take some impressions from it ; they very politely insisted on my acceptance of what they had used for years as a flat weight to lay upon papers on the end of the desk.

“ Beside the Sallust, I have another work, printed some years after, from plates of Mr. Ged’s manufacture. The book is ‘ The Life of God in the Soul of Man,’ printed on a writing pot, 12mo, and with the following imprint : ‘ Newcastle ; printed and sold by John White, from plates made by William Ged, Goldsmith in Edinburgh, 1742.’ It is a very neat little volume, and is as well printed as books generally were at the time.

“ Though we had reason to fear, from what we found Ged had met with, that our efforts would experience a similar opposition from prejudice and ignorance, we persevered in our object for a considerable time, and at last resolved to take out patents for England and Scotland, to secure to ourselves, for the usual term, the benefits of our invention ; for the discovery was still as much our own as if nothing similar had been practised before ; Ged’s knowledge of the art having died with his son, whose proposals for reviving it, published in 1571, not having

been followed with success, he went to Jamaica, where he died. The patents were accordingly obtained ; nay, they are even expired ; and yet we hear people, who only began their stereotype labours *yesterday*, taking to themselves the merit of being the first inventors !—As to *benefits*, however, I have as yet reaped none, and Mr. Foulis I believe has reaped as few ; for, owing to circumstances of a private nature, and which no way concern the public to know, the business was laid aside for a time ; and having afterwards quitted Glasgow and removed to London, I soon found myself so much occupied with other concerns, that I have hardly had time even to think upon it since. I ought however to observe here, that its being suspended was not on account of any imperfection attending the art, or objections against its being a fit object to be prosecuted. On the contrary, several small volumes were actually printed from plates made by myself and Mr. Foulis, and the editions were sold to the trade without any intimation of their being printed out of the common way ! We had heard whispers that our work could not possibly be such as would pass for *common printing* ! The trade knew what we were at, and would *take care* of any thing done in the *new-fangled* way ! The first essays, therefore, were, in the lowest sense of the word, common : one or two *histories**, and a cheap edition of the Economy of Human Life. We also printed a Greek volume, ‘Xenophon’s Anabasis,’ 1783, and had plates for several small volumes of the English Poets almost finished, but the latter were never put to press.

* A kind of books technically so called, such as “The Seven Champions of Christendom ;” “The Twelve Cæsars ;” “The History of Valentine and Orson ;” “The French Convert ;” and such scientific and classical performances, of which great numbers are annually exported to America.

“Twice then had this art been invented and practised in Britain, when about three years ago Didot, the celebrated French printer, applied it to logarithmic tables, and afterwards to several of the Latin classics, and to various French publications, which he has executed with considerable accuracy. The press-work has been carefully attended to, and does great credit to the printer. Indeed, after what Didot has done, clamour and prejudice will attempt in vain in future to decry letter-press-plate, and his name will always be mentioned as a principal promoter of this useful art, the introduction of which will be marked as a singular era in the history of printing. Some of his countrymen indeed, (for I cannot suppose Didot would attempt it), wish to ascribe to him the whole merit of the invention, and to have it believed that it originated with himself. The facts I have stated show with how little justice this claim is made. It is true he may have discovered, for himself, the secret of the art; but it is hardly credible that he could be ignorant of Ged’s progress and of ours, especially as it is well known that, when patents are obtained, a specification of the process is obliged to be put upon record, of which any one may obtain an office copy at a small expense.

“Having stated what relates immediately to the invention of modern stereotype, it would not be ingenuous were I not to state that claims have been set up in favour of a Dutchman, as having practised the art even prior to Ged. The following extract, translated from *Nieuw Algemein Konst en Letter Bode*, 1798, No. 232, will put our readers in possession of all we have yet met with respecting this printer.

““Above a hundred years ago, the Dutch were in possession of the art of printing with solid or fixed types, which in every respect was superior to that of Didot’s

stereotype. It may, however, be readily comprehended that these letters were not cut in so elegant a manner, especially when we reflect on the progress which typography has made since that period. Samuel and J. Leuchtmans, booksellers at Leyden, have still in their possession the forms of a quarto bible, which were constructed in this ingenious manner. Many thousand impressions were thrown off, which are in every body's hands, and the letters are still good.

“ ‘ The inventor of this useful art was J. Van der Mey, father of the well known painter of that name. About the end of the 16th century he resided at Leyden. With the assistance of Muller, the clergyman of the German congregation there, who carefully superintended the correction, he prepared and cast the plates for the above-mentioned quarto bible. This bible he published also in folio, with large margins ornamented with figures, the forms of which are still in the hands of Elwe, bookseller at Amsterdam ; also an English New Testament, and Schaaf's Syriac dictionary, the forms of which were melted down ; and likewise a small Greek Testament in 18mo.

“ ‘ As far as is known, Van der Mey printed nothing else in this manner ; and the art of preparing solid blocks was lost at his death, or, at least, was not afterwards employed. The cause may readily be conceived ; for, though this process in itself is very advantageous, it is far more expensive than the usual method of printing, except in those cases when such works are to be printed as are indispensably necessary, and of standing worth. The number of these, however, is certainly small, especially as we are acquainted with no instance in the annals of Dutch printing, that any dependance can be placed on

the sale of 150,000 copies, as was the case with the brothers Guyot.'

"The publisher of the preceding notice supposes, nay asserts, that the expense of stereotype precludes its use, except in the case of standard authors, whose works are sure of an extensive sale ; but, unhappily for his mode of reasoning, exactly the converse of this is the truth ; for, if there would be an advantage in applying the stereotype art to books of rapid sale, there would be a still greater one in the case of those publications whose sale may be less certain, as at the worst there could only be the loss of the plates, in place of that of the paper and presswork of a whole edition, which, in almost every case, would amount to a much larger sum. The expense, then, attending the process (if, indeed, Van der Mey's was the same as ours) was not the cause of its being laid aside in Holland. The probability is, that his art died with himself ; for we find that Ged had ' offers from Holland, repeatedly, either to go over there, or sell them his invention ;' which would not have been the case had they been possessed of their own countryman's."

Here closes Mr. Tilloch's account of the origin and progress of the stereotype art.

Some years after Mr. T. had given up the prosecution of this invention, Mr. Wilson, a respectable master printer, engaged with Earl Stanhope for the purpose of bringing it to perfection, and eventually to establish it in this country. Earl Stanhope, it appears, received his first instructions in this art from Mr. Tilloch, and had afterwards the personal attendance of Mr. Foulis for many months at his seat at Chevening, where his Lordship was initiated in the practical part of the operation.

After two years of incessant application, Mr. Wilson announced to his friends "that the genius and persever-

ance of Earl Stanhope had overcome every difficulty ; and that accordingly, the various processes of the stereotype art had been so admirably contrived, combining the most beautiful simplicity with the most desirable economy,—the *ne plus ultra* of perfection with that of cheapness.”

Many insurmountable difficulties, we are persuaded, attend the adoption of this invention, for *every* department of the printing business. It must be confined to books of standard reputation and extensive sale, and to such as cannot be subject to any alterations. The saving of case-work appears to be the principal advantage in stereotyping ; the gain, therefore, on works printed with any letter larger than longprimer, must be trifling. In heavy works only, set in pearl, nonpareil or brevier, will this advantage be felt.

That we may state the case *fairly*, we shall here lay before our readers the arguments for and against the introduction of this art in the printing business.

The following paragraph appeared in the Monthly Magazine for April, 1807.

“ Stereotype printing has not been adopted by the booksellers of London, because it does not appear that more than twenty or thirty works would warrant the expense of being cast in solid pages ; consequently the cost of the preliminary arrangements would greatly exceed the advantages to be attained. On a calculation, it has appeared to be less expensive to keep certain works standing in moveable types, in which successive editions can be improved to any degree, than to provide the means for casting the same works in solid pages, which afterwards admits of little or no revision. As the extra expense of stereotyping is in all works equal to the expense of seven hundred and fifty copies, it is obvious that this art is not applicable to new books, the sale of which cannot be ascertained. Although these considerations have induced

the publishers of London not to prefer this art in their respective businesses, yet it has been adopted by the Universities of Cambridge and Oxford; and from the former some very beautiful editions of Common Prayer Books have issued to the public; probably the art of stereotyping applies with greater advantage to staple works of such great and constant sale, as prayer-books and bibles, than to any other.’

In the next number of that work, Mr. W. made the following remarks in contradiction to the above statement.

“ In this statement there are several mistakes, calculated to mislead the public mind. It is due from me, not to the *booksellers of London*, particularly, but to the Book-sellers and to the PRINTERS too, of England, Scotland, and Ireland, to the Masters of public schools and private seminaries, to the Governors of Institutions for the gratuitous circulation of books, to all persons interested in the faithful and economical education of youth of both sexes, and in general to the whole literary world,—it is due from me to bring forward something more than bare assertion upon the present occasion; to state what really are the advantages peculiar to stereotype printing, which I presume I am rather better qualified to do than are those persons who know nothing of the subject. The advantages arising from an application of the stereotype invention to the manufacture of books, are not confined to any particular department of the printing business. In every department of expenditure they are as self-evident as profitable, and need only to be mentioned to be well understood. In the first place, the *wear of moveable types*, in stereotyping, does not exceed 5l. per cent. of the heavy expense incurred by the old method of printing.—2dly. The expenditure upon *composition and reading* is nearly the same by both methods, for a first edition: but this great expense must be *repeated* fo

every succeeding edition from moveable types ; whereas, by the stereotype plan *it ceases for ever*.—3dly. The expense of *stereotype plates*, when I am employed to cast them, is not 20l. per cent. of that of moveable type pages.—4thly. The expenditure upon *paper* and *press-work* is the same by both methods ; but it is not incurred at the same time. The old method requires an advance of capital for a consumption of four years ; whereas, by stereotype, half a year's stock is more than sufficient. It follows, therefore, that 12½l. per cent. of the capital hitherto employed in paper and press-work is fully adequate to meet an equal extent of sale.—5thly. A fire-proof room will hold stereotype-plates of works, of which the dead stock in printed paper would require a warehouse twenty times the size ; and thus *warehouse-rent* and *insurance* are saved ; with the additional advantage, in case of accident by fire, that the stereotype plates may be instantly put to press, instead of going through the tedious operations of moveable type printing ; and thus no loss will be sustained from the works being out of print.—6thly. In stereotype, every page of the most extensive work has a separate plate ; all the pages, therefore, of the said work, must be equally new and beautiful. By the old method, the types of each sheet are distributed, and with them the succeeding sheets are composed ; so that, although the first few sheets of a volume may be well printed, the *last* part of the same volume, in consequence of the types being in a gradual state of wear as the work proceeds, will appear to be executed in a very inferior manner.—7thly. The stereotype art possesses a *security* against *error*, which must stamp every work so printed with a superiority of character that no book from moveable types ever can attain. What an important consideration it is, that the inaccuracies of language,

the incorrectness of orthography, the blunders in punctuation, and the accidental mistakes that are continually occurring in the printing of works by moveable types, and to which every new edition superadds its own particular share of error,—what a gratifying security it is, that all descriptions of error are not only completely cured by the stereotype invention, but that the certainty of the stereotype plates remaining correct, may be almost as fully relied on as if the possibility of error did not at all exist !—If these observations be just with reference to the printing of English books, how forcibly must they be felt when applied to the other languages generally taught in this country !—how much more forcibly when applied to those languages which are the native dialects of the most ignorant classes throughout the United Kingdom, but which are as little understood as they ~~are~~ generally spoken !—8thly. Stereotype plates admit of alteration ; and it will be found that they will yield at least twice the number of impressions that moveable types are capable of producing.—Lastly, All the preceding advantages may be perpetuated, by the facility with which stereotype plates are cast from stereotype plates.

“ Such is a general outline of the present state of the stereotype invention ; and such are the obvious advantages arising from it to learning and to ignorance,—to every state and condition of civilized life. From the whole it results, that a saving of 25l. to 40l. per cent. will accrue to the public in the prices of all books of standard reputation and sale, which, I believe, are pretty accurately ascertained to comprehend THREE FOURTHS of all the *book* printing of England, Scotland, and Ireland. It is fair to conclude, therefore, that the sales, both at home and abroad, will be considerably increased, and that the duties on paper will be proportionally productive ; so that the public will be benefited

in a twofold way by a general adoption and encouragement of the stereotype art. With this view, I think the period is now arrived when I ought to announce to all the respectable classes before mentioned, particularly to printers and booksellers, that I am fully prepared to enable them to participate in the advantages to be derived from the stereotype art, in any way that may be most conducive to their particular interests, either individually or collectively."

We shall now state the arguments generally advanced in opposition to the practice of this invention.

In the first place the expense of the composition of every page, (it being imposed separately, and two proofs, at least, taken from it before it can be in a proper state to undergo the process of making a plate from it), must be considerably greater than in the common mode.

Secondly. In a first edition the bookseller has not only to pay for the higher-priced composition, but must be at the great expense of the stereotyping, which, in metal, independent of the charge for workmanship, is equal in weight to one fourth of the same work set up in moveable types.

Thirdly. The printer in stereotype must use higher-priced presses than are now commonly used, and must consequently increase his charge per ream; for hitherto all stereotype works have been printed at the Stanhope press, and at these presses it has not been done at the *common price*.

Fourthly. The shape and manner of the first edition *must* be continued, or the first expense must be again incurred; for no deviation as to plan or size can possibly take place, nor any advantage be reaped from the future improvements in the shape of types.

Fifthly. The bookseller has, *at present*, the certainty,

or nearly the certainty, of detecting, particularly in town, any unjust advantage which might be taken of him, in point of number, by those with whom he entrusts his works : that important security will be wholly done away by plate-printing. He must also be subject to the loss sustained by the damage of plates, (a highly probable circumstance), together with fraud by the "*facility with which stereotype plates are cast from stereotype plates.*"

We shall not now enter into any particulars upon this last, which we conceive, most important objection to stereotyping ; it is however an objection that will not lose weight by examination, and may be well worth the attention of those who are hesitating whether the OLD PRACTICE or the NEW is the *safest*.



No. IV.

FINE PRINTING.

It must be as gratifying to those who are particularly interested in the advancement of the liberal arts, as to those who contemplate them with a patriotic regard, to behold the present state of British Typography. Many years ago Baskerville gave the first impulse to improvement, which has since continued to increase through almost every part of the kingdom. The printers on the

Continent for a considerable period of time took the lead in beauty of workmanship ; and indeed, from several circumstances which will be mentioned hereafter, the path was easier for them to tread than it could be for us, as some of the impediments which retarded our early improvement, cannot be easily removed or overcome. The works of several foreign printers are celebrated throughout the lettered nations of the world ; and it must be satisfactory to reflect, that their names can now be met by some of our own countrymen. By those only who have attempted to bring the art to perfection is the difficulty of its attainment truly appreciated ;—they best can estimate the labour who have toiled in the pursuit.

Fine printing has lately been attempted by so many persons, that there seems to be as much discrimination necessary in judging of a well printed book, as there is in forming an opinion of the production of the pencil or the engraver. Some printers imagine, if they make their pages sufficiently black, that the end is gained ; others, if they are pale and clear ; so that each has a style peculiar to himself.

Real perfection is however unalterable, as far as relates to the duty of the printer, and however we may differ in our opinion respecting the fanciful display of our pages, or the form that constitutes beauty in our type, there is an effect which cannot be dispensed with. The great endeavour of many printers, who have aimed at improvement, has been to produce a sharpness of impression and fulness of colour, corresponding with that which is so easily attainable at the copper-plate press : but however eagerly such an effect may be sought after, an absolute match will never be produced, though it may be very nearly approximated. In seeking after the effect

which belongs to another art, we are neglectful of the excellences which are characteristic of our own, nor have we occasion to lament our failure in the pursuit, when we consider how much ours is capable of performing. With proper materials, properly employed, the impression from the printing press will exhibit its peculiar character; and the fine relief and clear outline which it will produce, is more to be prized than that of an art to which it may bear some relationship.

Those who have had opportunities of inspecting the early productions of the press, will naturally conclude that in course of time this art became retrograde; for there are yet in existence works of the fifteenth and beginning of the sixteenth century, which, whether we examine them for the difficulty of their execution at case or at press, will bear a near comparison with any that are now produced. Few of the mechanic arts seem, on their first invention, to have made such rapid approaches to perfection as the art of printing; this may be accounted for by the early estimate of its value to society and the cause of literature, and by the unexampled patronage it obtained as being the gate to knowledge and to fame.

The improvements which have taken place in all the arts connected with letter-press printing have given a powerful stimulus to the exertions of the printers of this country. As engraving on copper and on wood was cultivated, it became absolutely necessary that the typography, which was a frequent companion, should not, by its common and imperfect appearance, abate that satisfaction which was sought to be communicated. That the powers of wood-engraving, an art most intimately connected with our own, are limited, is easily demonstrable; yet its importance is by no means unworthy of regard. Were we not to attempt to force it beyond its capabilities,

its general advantages would be more apparent and more sought after. A capricious taste has been produced in consequence of several first-rate artists putting their genius to the stretch, that their works might vie with copper-plate, and some have produced very wonderful specimens. But, however curious these productions may appear, and however nearly they may attain their end, they will be found, on a comparison with copper, to be very unlike. This difference will always exist; it is a consequence of their different methods of working; their powers are as various as the effects produced are dissimilar, and we are as much disappointed in examining a wood engraving, in hopes of finding the softness of flesh and delicacy of skin, which is produced by a good artist upon copper, as we are disappointed in not meeting with that broad, deep shade, and strength of contrast, which the engraver on wood may always exhibit. The great point seems to be to discriminate properly what is the real province and usefulness of an art, and not, by overstraining its powers, to raise expectations which it cannot gratify, and which, while our eyes are directed beyond what it can perform, leave it unregarded, and suffer the art and the artist to sink together.

No kind of engraving is better calculated to preserve the real outline and proportion of the designer, than that of which we are now speaking: this will be easily credited when it is stated, that he generally makes the drawing with pencil upon the block, and the duty of the engraver is with the greatest exactness to leave those lines standing by cutting away the interstices. Thus, as the most unfinished etchings on copper, of the ancient masters, are more valuable than any imitation of them by a second hand, the powers of the engraver on wood can always be depended upon for giving, as

far as the drawing and proportions are concerned, a faithful transcript of the performances of the designer.

It may be necessary here to remark, that the difficulties attending the printing of wood-engravings are very considerable, and that, however the designer and the engraver may labour, should the printer not be a judge of the effect intended to be brought out, and know well how to manage his block, all their labour will be fruitless. This observation applies more particularly to the finer kinds of engraving, but in some degree to all. In this department of the art much depends upon the quality and colour of the ink, no public vender of that article having yet, as far as the writer hereof has seen, succeeded in producing a kind that will give satisfaction to real judges of beauty and effect.

It has been before stated, that the printers on the Continent (those of Parma and Paris in particular), have it in their power to produce finer specimens of printing than can be done by us. One of these advantages arises from the nature of their climate, which is not subject to the variations of temperature we daily experience, and which acts powerfully upon the oil of which our ink is composed, disposing it at one hour to spread equally over the balls, and at another rendering it so glutinous and stiff, as to tear the surface of the paper, and defy the efforts of the pressman, without a great increase of heat in the place where he is working; and even should he raise the temperature ever so high, if the frost be intense, his endeavours will be fruitless. It is a curious fact, that heat will not entirely counteract the effects of a freezing atmosphere upon some kinds of printing ink.

But the chief obstacle to the production of fine printing, or indeed to any printing above the very commonest standard, arises from the practice which has been lately

adopted, of using cotton rag in the manufacture of fine paper, and the application of the oxygenated muriatic acid for the purpose of obtaining dispatch and delicacy of colour, and producing a paper in appearance good, from an inferior staple. Nothing can be more perplexing to a printer, nor more detrimental to his labours, than what is called *bleached* paper; for although it may be thick and seem strong in the ream, no sooner does the water penetrate through it, than it loses its adhesive quality, and becomes so loose and soft as scarcely to bear handling, and in working sinks down into the letter, leaving a part of its substance behind after every impression, until it so clogs the type, that the work is often rendered scarcely legible. Nor is it less exceptionable in point of durability, as it must moulder away in a little time with the common use that popular works generally undergo. The very best paper that is produced in this country, is not so well calculated for printing upon as that manufactured in France; there is a toughness, accompanied with a softness of texture, in French paper, which is much superior to ours. But of all paper, that which is made in India is superior for taking clear impressions from wood blocks, and for producing a sharp impression from a letter-press form; it cannot, however, be recommended for strength or durability.

Taste, which is continually changing, has made strange revolutions in the form of our printing types; we no longer use the thin and meagre-faced letter with which our works were formerly printed. That there was ample room for improvement is sufficiently manifest, but the rage has unfortunately run into the opposite extreme, and now nothing is considered handsome but that which exhibits as broad a surface as the dimensions of the body of the type will admit, in many instances forcing the

letters so close together, that the word appears an indistinct mass of black, and cannot be read with facility. Another extravagance has been daily increasing upon us, from the desire of the letter-founders that their types shall stand well in line, and which is certainly a great perfection: in order to render this object more apparent, the horizontal line at the top and bottom of the letter, where it occurs, is carried so far out, on each side of the stalk, as to give the page somewhat the appearance of being ruled. Nor can the present general squareness of form and grossness of face be considered as removing any defect. The disadvantages attending such letter are manifold. Owing to the delicacy of the top and bottom lines, it will not last so long as that of the old form, the slightest use destroying these lines, and at the same time the newness of its appearance; besides, by exhibiting a much larger surface to the pressman, to be covered with ink, more care is required in beating and pulling, a duty which we rarely find men, striving in the ordinary course of business to make the best use of their time, at all willing to bestow; and without this care, the effect produced is worse than that of letter from the old matrices. The public taste will, it is to be hoped, in time settle between the two extremes, and when that shall take place, we shall have the pleasure of seeing strength, grace, and lightness, exhibited on the same page.

With respect to the colour of printing ink, a difference of opinion certainly exists; one kind being admired for its glaring effect, and another for its softened richness and warmth; the latter, though in fact of as deep a colour as the former, is yet so tempered, as not to injure or fatigue the eye, becoming more agreeable the more it is examined. A few printers who have cultivated the art, now manufacture their own ink: indeed that which has

hitherto been sold by the usual makers, possesses very few of the requisites necessary for fine printing.

Some directions may be expected for assisting the printer in producing fine specimens ; but every one who has attempted improvement has some peculiarities which are not in common practice ; therefore all that can be done is to give a slight sketch of the general method.

THE PRESS best calculated for this, or indeed for any other kind of printing, is that lately invented by Earl Stanhope, and originally made by Mr. Walker. The perfect plane in the table and plattin has long been a desideratum, which is in this machine completely supplied. The public at large, and the printers in particular, are much indebted to this patriotic nobleman for his invention, and the only circumstance to be regretted is the great expense of its purchase, which precludes its general use ; but this evil, it is to be hoped, will yet be remedied, as it is a great impediment to the benefits designed by his Lordship to have been conferred upon the art.

THE PAPER to be wet in such a manner as to retain its firmness, yet be sufficiently soft to apply closely to the surface of the letter, and take up all the ink.

THE INK is left to the judgment of the printer as to colour and quality.

THE BALLS, on which so much depend, ought to be particularly attended to ; the skin to be trodden until it adheres to the foot, and not to be nailed on the stock until it will imbibe the ink freely, without the application of heat.

THE TYMPANS to be continued in a state of tension, by changing the blanket and the slip-sheet as they become damp.

THE BLANKET must be of fine broad cloth or kersey-mere, and only one to be used.

When printing large letter, the surface of which requires to be well filled with ink, a sheet of tissue paper, or common paper damped, is often laid between every impression, to prevent the sheets from setting off on the back of each other.

The foregoing observations are chiefly the result of the practical experience of the writer, and are communicated to the public at the earnest request of the editor of this work. He wishes it to be recollected, that they were drawn up amid the hurry of business, and that he was not applied to until the press was nearly at a stand for this part of the work.

But however laudable it may be to cultivate the art to perfection, it is to its common and more general application that we are to look for its great and beneficial effects upon the human intellect, and upon nations and societies of men. The Press is the great engine by which man is enabled to improve the faculties of his nature;—it is the preserver of the knowledge and acquirements of former generations, and the great barrier, when not perverted by the hand of power, against the debasement of the human mind, and the equalizing effects of despotism.

“ Ages remote by thee, VOLITION, taught,
Chain'd down in characters the winged thought ;
With silent language mark'd the letter'd ground,
And gave to sight the evanescent sound.
Now, happier lot ! enlighten'd realms possess
The learned labours of the immortal PRESS ;
Nurs'd on whose lap the births of science thrive,
And rising arts the wrecks of Time survive.”

Darwin's Temple of Nature.

No. V.

THE STANHOPE PRESS.

This press is the invention of the patriotic nobleman whose name it bears. After many expensive and laborious experiments, his lordship, with the aid of an ingenious mechanist (Mr. Walker), has succeeded in this invention to the full extent of his most sanguine expectations. This improvement has been applied to a great number of the common presses of the metropolis, but, as will be shewn hereafter, without success.

The Stanhope press has been lately made by several individuals, at a price considerably lower than that charged by Mr. Walker, the original manufacturer. This reduction of the great expense of its purchase was received with much satisfaction by the trade, as it tended to do away that evil which has been thought would preclude its general use. We have been at some pains to ascertain whether these presses are as perfect as those from the original manufactory, and we are constrained to give it as our opinion, supported by that of some of the most respectable printers, that they are generally defective, either in the table or plattin, or in both; for, unless the under face of the plattin and the surface of the table are both accurately flat, and, by the construction of the press, held as accurately parallel to each other, the pressure will be unequal, and, of course, the impression produced will be more or less defective. These very important matters certainly cannot be done without considerable ability and great expense, but they are evidently indispensable in a good press; and the Stanhope press, with such defects, becomes, instead of an acquisition to the trade, almost useless.

As the internal construction of the press cannot be shewn in the general view of it, given in the beginning of this work, we shall proceed to a dissection of the principal parts; and, with the assistance of a separate figure for each, describe their construction and use, and then refer them to their respective situations in the general view.

Fig. 1.

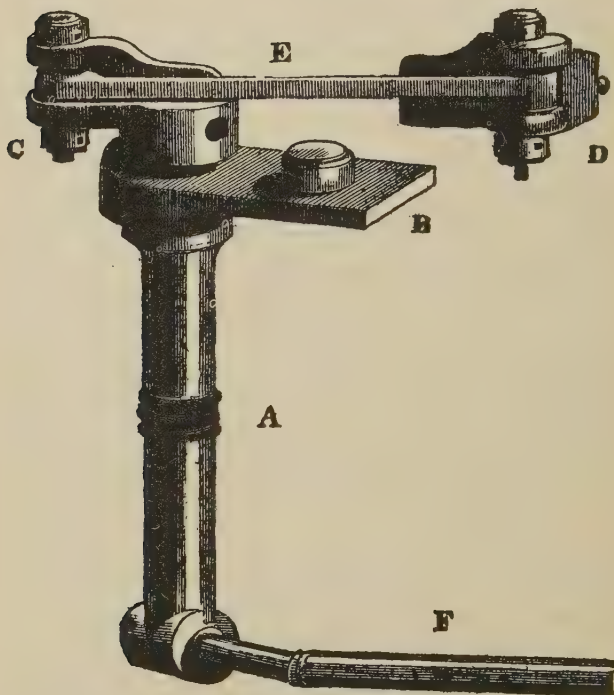


Fig. 1 shews part of the bar handle, with the apparatus by which it is connected with, and acts upon the spindle, or screw. *A* is an upright pillar, or arbor, situated at the outer edge of the staple of the press, its lower end resting on a pivot, its upper being held by the top plate *B*, through which it passes, and receives the piece *C*; a bar, *E*, connects this with a similar piece. *D*, in which is fitted the top of the screw. *C* is called the arbor head; *E* the lever,

and D the pin head; the top plate, B, is fixed to the top of the press by a screw, the head of which is seen in the figure. F shews the insertion of the bar handle in the arbor, and the figure, therefore, explains the means by which the pull operates on the screw.

Fig. 2.

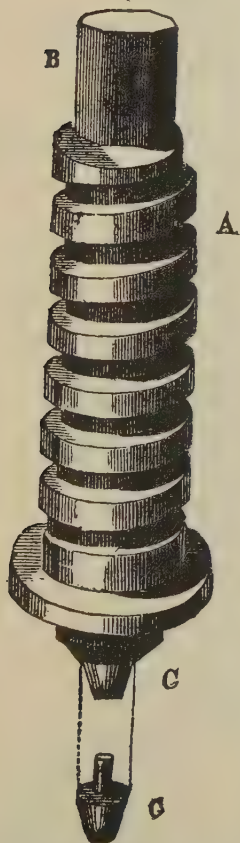


Fig. 3.

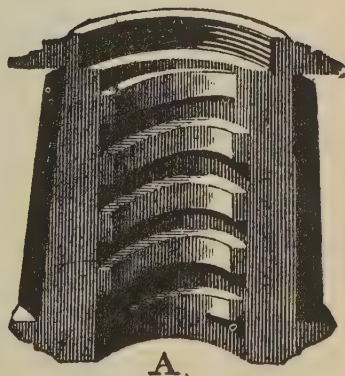


Fig. 2 is the screw, of which A is the thread; B, the top, is hexagonal, or what mechanics understand by six square, and is fitted into the pin head, Fig. 1. The piece shown at C forms, what is generally called, the toe of the spindle; it is here a centre of cast steel, and somewhat rounded at its lower end; it is repeated in the

figure, to shew the pin by which it is inserted in the screw, and the shoulder formed by the pin with the lower part; this contrivance affords a ready method of adjusting the pull of the press; a thin metal collar being dropped over the projecting pin on the shoulder, will evidently alter the pressure in proportion to its thickness; thus, a collar of 1-16th of an inch in thickness, is found equal to one blanket, and somewhat more.

The screw works by its thread in the piece seen at Fig. 3; this is called the box, and being fixed in the upper part of the press, performs the office of the head in the old press.

The lower end of the screw passes into a hollow cup, at the bottom of which is a steel centre, with a flat face, on which the screw bears by the pin C, in Fig. 2.

Fig. 4.

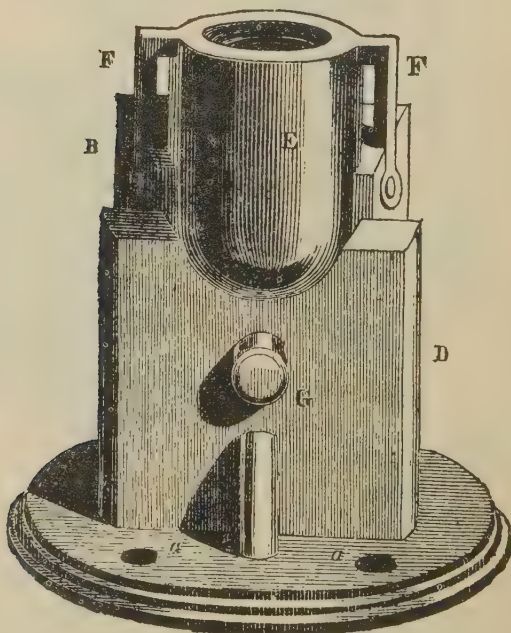
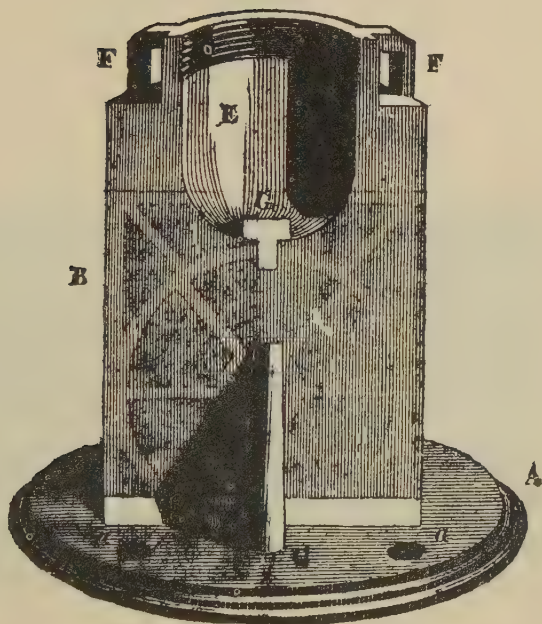


Fig. 5.

This cup is seen in Fig. 4 and 5. Fig. 4 shows the front side, and Fig. 5, the back, with a section of the cup, shewing the centre on which the screw acts; thus E is the cup in both figures; G is the centre; F, F are steel loops, for a purpose which will be hereafter explained; B is a solid piece forming the frame of the cup, by which it is placed upright on a circular plate, A, A. In Fig. 4, D is a back plate, held to the cup piece by the screw G. C in Fig. 5, and a similar piece in Fig. 4, are front views of projecting pieces called stays, for the purpose of holding the cup firmly upright.

The circular plate A, A is fastened to the plattin by four screws at the holes a, a, seen in both figures.

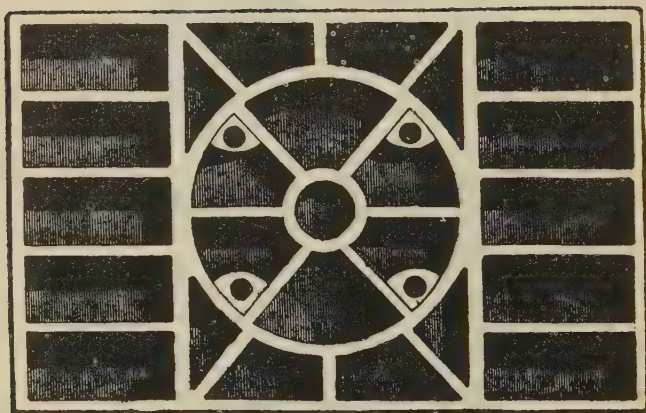
Fig. 6.

Fig. 6 is the platûn. It is entirely of iron; the circle, A, A, corresponds with the bottom plate, A, A, in figures 4 and 5, and the holes seen in the four corner pieces within this circle, receive the screws by which these two pieces are held together.

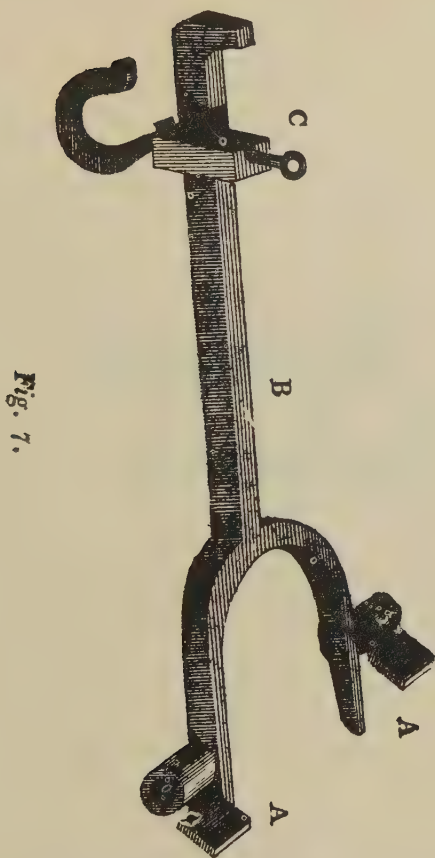


Fig. 7.

Fig. 7 is an apparatus which is attached to the hinder part of the press by the ears seen at A, A. The extremities of the fork are steel on their upper sides, and pass into the steel loops, F, F, before spoken of in Fig. 5, which is thus suspended by them: on the straight bar, B, moves a sliding piece, C, which is provided with a hook, and bears an iron weight of about $\frac{3}{4}$ cwt. this forms the counterbalance to the pull, and at the return of the bar lifts the plattin from the form. The power of this counterbalance is, of course, variable at pleasure, by altering its distance on the bar; it is held at the required point by a tightening screw, which passes through the upper side of the sliding piece.

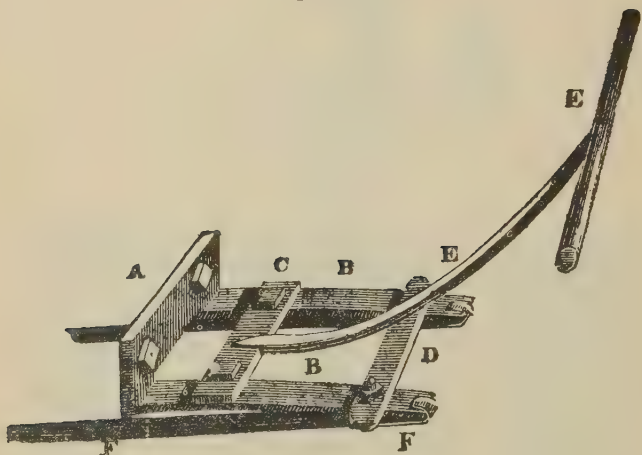
Fig. 8.

Fig. 8 is the gallows, in which the frame A, B, B is screwed to the front of the carriage, between the joints of the tympan. C is a flat bar, which is fastened across the piece B, B, and from which proceeds the curved rod E, E, having a cross piece at its upper extremity; D is a coupling which holds fast the ends of the straps; the straps themselves are seen at F, F; they pass as usual beneath the carriage ribs, and round a double wheel fixed on a spit, and so to a frame work, somewhat similar, at the other end of the press.

After carefully examining the account of the separate pieces, with reference to their figures in the engravings, there can be no doubt but a mechanic, or any person accustomed to a common printing press, will easily understand the construction of this, by reference to the general view of it at the beginning of the work.

It will there appear, that, by this improvement in the construction, the checks, the cap, and the winter of the

old press, are not required. The office of the head in the old press, is here performed by the piece shown separately at Fig. 3; that of the shelf and hose, by the figures 4 and 5; and that the old construction of the spindle and bar handle is here improved upon by the arrangement shewn in figures 1 and 2.

The plattin, at Fig. 6, is, in this press, fixed to the hose, or apparatus through which the screw works; and it will also be seen, that it is suspended to the short arm of a lever, provided with a counterbalancing weight, by which the form is released from the plattin at the return of the bar, after the pull.

For the stone is substituted a cast iron block, which has its upper surface made accurately flat, and is laid correctly horizontal; this, with the provision made for a perpendicular pressure on the plattin, and the care taken to set its lower face parallel to the surface of the block, ensures an uniform pressure on the form.

The apparatus which takes the place of the old fore-stay, sufficiently explain itself in the engraving.

The ink block is here a block of the usual thickness, with a ledge of sheet iron, and is supported by a light frame work of iron rods. The balls are held by a projecting fork.

The tympan, &c. are as usual, and the whole press is firmly set on a massy block of wood, of the form and relative dimensions shewn in the engraving.

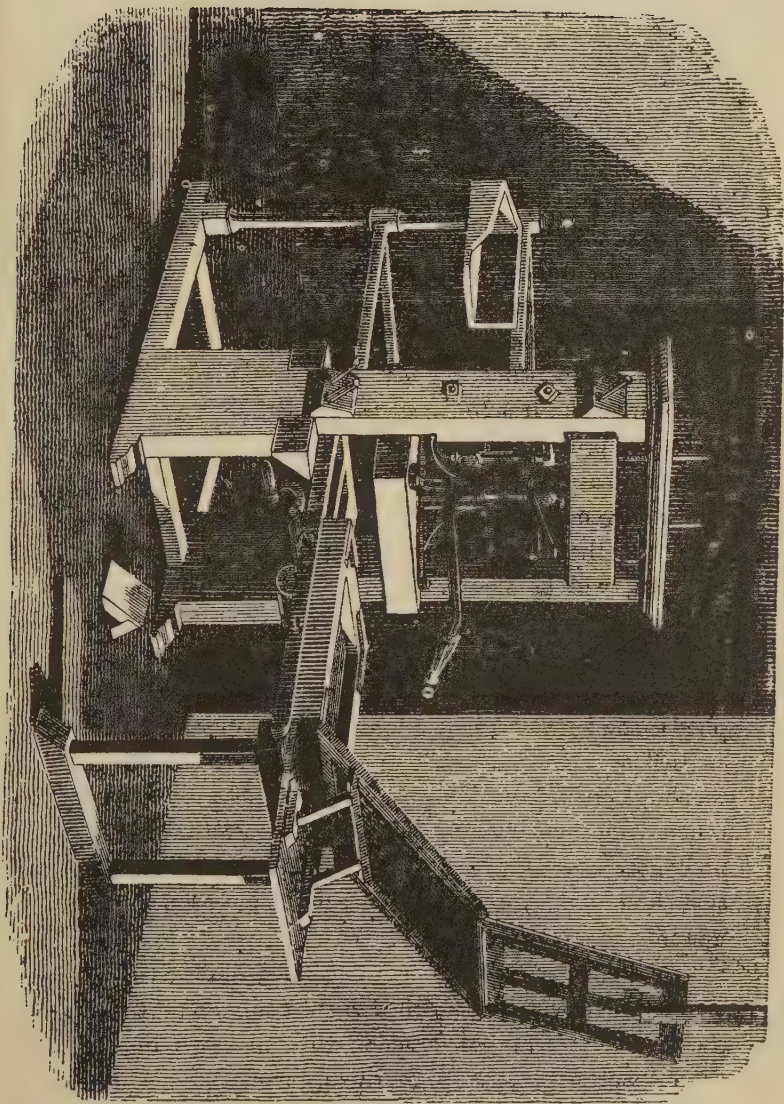
It has not been considered necessary to encumber this descriptive account of the press, with the minute dimensions of the several parts. It will be sufficient to say, that in the separate figures the relative proportions of the small parts are observed; and that, in the general view of the press, the same relative proportions are observed among the pieces themselves.

BROOKE'S PRESS.

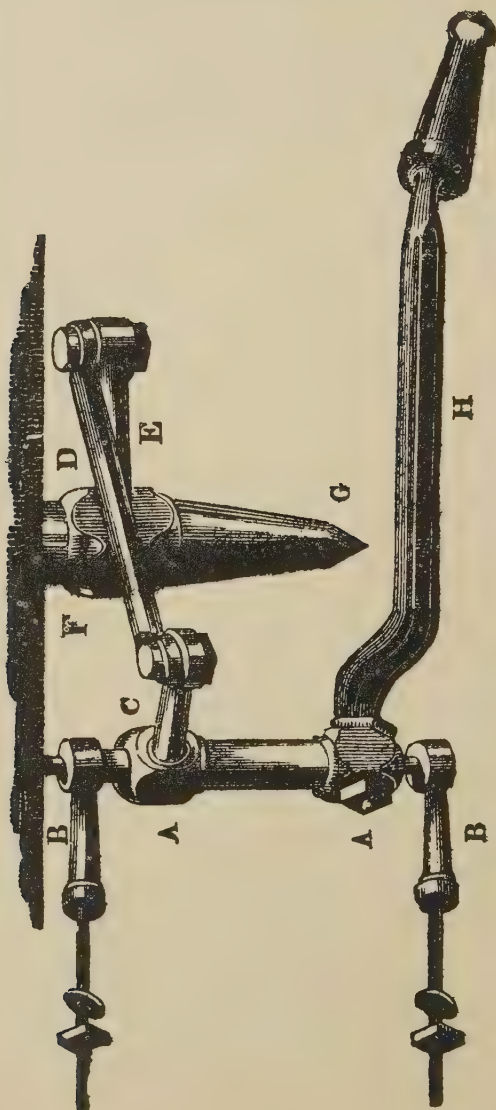
The application of the Stanhopian improvement to the common press has been attempted by nearly all the press-makers of the metropolis;—indeed some of the most respectable master-printers were at one time so sanguine as to the success of this plan, that it was expected in a few years there would not be a common press in London that had not undergone this important alteration. But experience, we believe, has now fully shewn how impossible it is to construct a machine of this sort, composed principally of wood, capable of resisting the great increased power intended to be produced by the new arrangement of the bar and spindle. The head and winter, let them be fitted into the cheeks with whatever firmness, will be affected more or less by the power produced—or, in other words, the resistance above, or the firmness of the head and winter, will turn out to be more or less unequal to the intended force of the pressure applied to the form. Where this is the case, that sharpness as well as smoothness of impression produced by the Stanhope press, from forms of pearl and nonpareil letter, is here completely wanting. These presses will however, no doubt, bring off a clear and sufficiently strong impression from light forms set in leaded long primer and upwards.

That we may convey a more correct idea of the Stanhopian improvement, thus applied to the common press, we shall here present our readers with an engraving of Brooke's press constructed on this principle.

Brooks's Press.



In a perspective drawing of a machine of this kind, it is impossible to shew all the parts sufficiently clear, so as to gain a perfect knowledge of its construction ; we shall therefore give sketches, with the dimensions of those parts which differ from the common press, and those which are intended to produce the same effect as the Stanhope press.

The Bar-handle and Lever.

The upright pillar, A, A, is 9 inches long, and 2 diameter.

The projecting pillars which support the upright, A, A, are 6 inches long to the shoulder, and are furnished with nuts and screws fixing through the cheek of the press.

The lever, C, is 4 inches long.

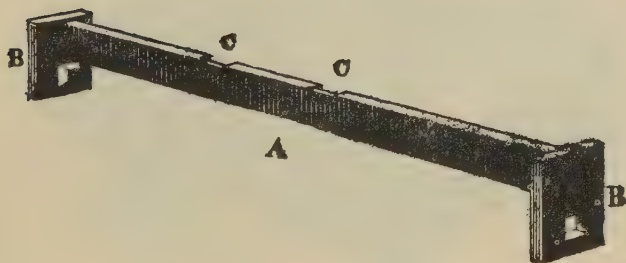
D, 12

E, 6

The spindle, F, G, is 9 inches, from the under side of the head at F, to the toe at G.

The bar-handle, H, is 2 feet 2 inches long.

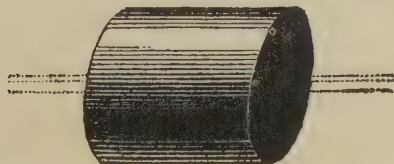
The Bar which extends between the Press Cheeks, for the support of the Lever and Weight.



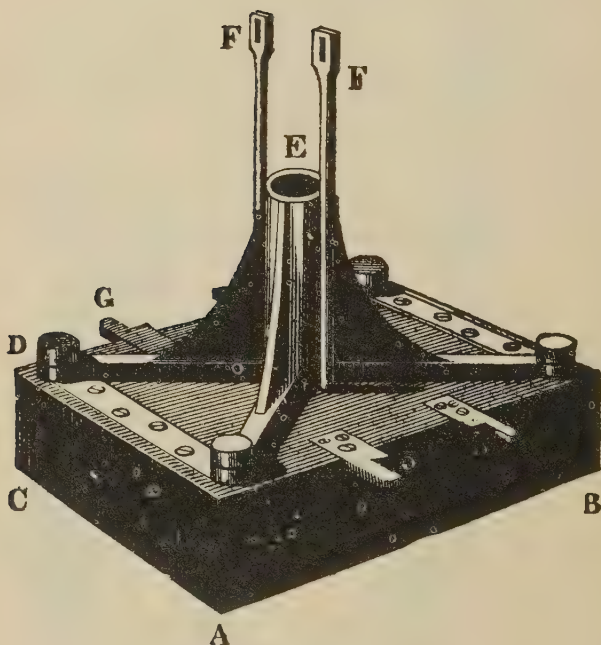
The length, between the flanges, B to B, is 1 foot 10 inches.

A, is an edge bar, in which C, C, are the notches on which rest the forks of the lever.

The Barrel of the Spit Wheel,



Is a plain cylinder, as shewn in the drawing, and is 6 inches long, and 8 diameter.

The Plattin.

The length, of A, B, is 2 feet 3 inches.

A, C, 1 7

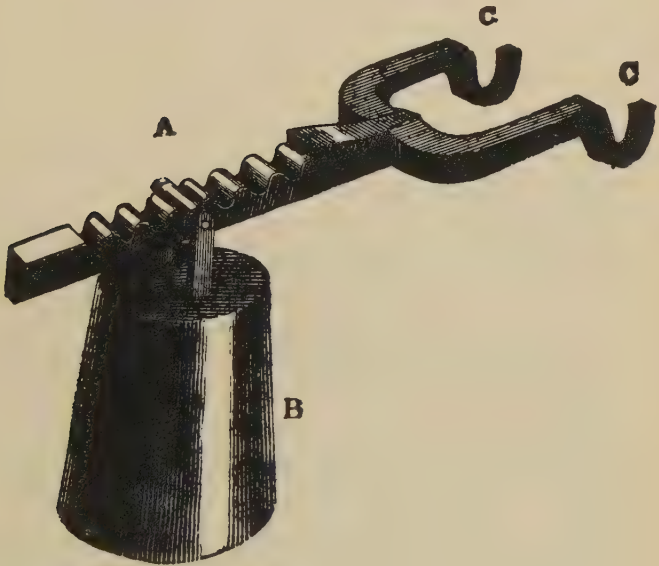
C, D, 0 4

Height of the cylinder, E, the top of which receives the toe of the spindle, is from E to H, 7 inches.

F, F, are iron rods, with an eye at the upper end of each, which receive the hooks, C, C, of the lever, and by which the plattin is suspended in the press.

G, G, are projecting pieces, set at the same distance apart as is the thickness of the cheeks, and by being exactly fitted to the sides, and the inner face of the cheeks, steady the motion of the plattin.

The Lever and Weight which suspend the Platin.



The toothed bar, A, is 9 inches long.

The weight, B, is 5 inches diameter at its upper, and 8 at its lower end ; it is 6 inches long, or deep.

The forks of the lever, C, C, are 5 inches long from the end of the toothed bar, and their extremities are 5 inches asunder.

No. VI.

PRINTING INK.

Printing ink of every sort should be of a smooth and mellow quality, such as will work clear, free from picks, distribute well on the balls, and soon dry ; the beauty and strength of the colour varying of course according to the price. It should be so manufactured as perfectly to unite the oil and colouring matter, otherwise it soon turns of a yellow-brown dingy hue, which has been too generally found to be the case with the common ink of most of the manufacturers. The finer sorts should be of a more solid consistence, but perfectly free from a pitchy quality.

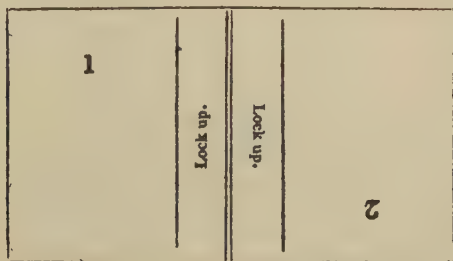
Very considerable improvements have been made in the superior sorts of printing ink by several of our most eminent master printers ; but the common ink with which three-fourths of the works published in this country are printed, has remained for a long period at nearly the same standard. Mr. Blackwell has, unquestionably, for many years produced better fine as well as common ink than any of his competitors ; but an improvement is still wanting, as to colour, in the common ink. We understand however from several respectable printers, that a Mr. Anstie has lately made an ink of this desirable quality which is likely to be much used by the trade. Mr. Blackwell from his long and extensive practice in this art, must, we think, be pretty well acquainted

with the necessary qualities of every description of printing ink, and the best mode of manufacturing it; but as there are many competitors in this as well as in every other art, he will do well to endeavour to preserve that celebrity he has so long and justly obtained.

No. VII.

THE MODE OF IMPOSING ABSTRACT TITLE DEEDS OF ESTATES.

Abstract of title deeds of estates are printed with blanks at the backs, with all the margin on the left side and on single leaves, being stitched at the corner. The following is the method of imposing the form to save press-work, as well as the charge of the compositor.



No. VIII.

A LIST OF THE ARTICLES USED IN THE PRINTING
BUSINESS, AND THEIR PRESENT PRICE.

	£.	s.	d.
Frame	1	4	0
Bulk	0	5	6
Cases, per pair	0	14	0
Fount ditto	1	4	0
Twenty-line Pica to Great Primer, at per pound	0	2	2
English and Pica ditto	0	2	4
Small Pica ditto	0	2	6
Long Primer ditto	0	2	8
Bourgeois ditto	0	3	4
Brevier ditto	0	4	0
Minion ditto	0	5	0
Nonpareil ditto	0	7	0
Pearl ditto	0	8	0
Diamond ditto	0	13	0
Bourgeois, and all above, 2-line, plain ditto	0	3	0
Brevier . . . ditto . . . ditto	0	3	6
Minion . . . ditto . . . ditto	0	4	0
Nonpareil . . . ditto . . . ditto	0	4	6
Pearl . . . ditto . . . ditto	0	5	6
Brevier, and all above, 2-line, open . ditto	0	5	0
Minion . . . ditto . . . ditto	0	6	0
Nonpareil . . . ditto . . . ditto	0	7	0
Pearl . . . ditto . . . ditto	0	8	0
Script ditto	0	4	0
Music ditto	0	8	0
Orientals and Flowers double the price of the body			
Large Letter cut on wood, from			
Six-line to Eight-line Pica, Roman and Italic, each letter	0	0	3
Ten-line ditto	0	0	4
Twelve-line ditto	0	0	5
Fourteen-line ditto	0	0	6
Sixteen-line ditto	0	0	7
Eighteen-line ditto	0	0	8

	£.	s.	d.
Twenty-line ditto	0	0	9
Twenty-four-line ditto	0	0	10
Thirty-line ditto	0	1	0
Thirty-four-line ditto	0	1	2
Forty-line ditto	0	1	4
Leads, 4 to a pica, per pound	0	1	10
Ditto 5 . ditto	0	2	6
Ditto 6 . ditto	0	2	4
Ditto 7 . ditto	0	3	6
Ditto 8 . ditto	0	4	0
Ditto 9 . ditto	0	4	6
Ditto 10 . ditto	0	5	0
Ditto 11 . ditto	0	6	0
Ditto 12 . ditto	0	7	0
Ditto 13 . ditto	0	8	0
Ditto 14 . ditto	0	10	0
Quotations per pound	0	1	10
French Rules and Dashes, each	0	0	6
Ornamental ditto	0	2	6
Double Rules ditto	0	0	4
Galley, octavo	0	1	0
Ditto quarto	0	1	6
Ditto folio	0	1	9
Ditto brass	0	8	6
Composing Stick	0	8	6
Setting Rule, at per doz.	0	9	0
Brass Rule . ditto	0	6	0
Page Cord, at per pound	0	2	6
Bodkin and Handle	0	0	3
Compositor's Candlestick	0	1	0
Riglet, 2-line English, per doz.	0	3	0
Ditto Double Pica ditto	0	3	0
Ditto Great Primer ditto	0	2	6
Ditto English, Small Pica, Long Primer, Brevier, Non- pareil, Pearl, and Card	0	2	3
Broad Quotation, per doz.	0	3	6
Double Narrow ditto	0	5	6
Broad and Narrow ditto	0	6	0
Double Broad ditto	0	6	6

	£.	s.	d.
Scaleboard, per bundle	0	14	0
Ditto Thin ditto	0	10	0
Side and Foot Sticks, per doz.	0	1	6
Ditto	0	2	0
Imposing Stone and Frame, single	2	16	0
Double ditto	5	0	0
Quoins, per 1000	0	16	0
Chases, royal, per pair*	1	14	0
Ditto demy	1	11	6
Ditto crown	1	6	0
Ditto foolscap	1	4	0
Ditto Job, according to size, the lowest price	0	4	6
Saw	0	5	6
Saw-Block	0	2	6
Mallet	0	1	6
Shooting-Stick	0	0	5
Plainer	0	1	0
Shears	0	3	6
Case-Rack	1	4	0
Board ditto	1	4	0
Letter-Board, Royal	0	6	0
Ditto Demy	0	5	0
Bellows	0	2	6
Bowl	0	1	6
Sink and Wetting Trough	12	12	0
Wetting Board, Royal	0	6	0
Ditto Demy	0	5	0
Lie-Trough	3	3	0
Pearl-Ash, per pound	0	0	9
Lie-Brush	0	8	6
Common-size Printing Press	31	10	0
Foolscap ditto	21	0	0
Stanhope ditto by Walker	73	10	0
Ditto by Shield and Co.	63	0	0
Brooke's ditto	42	0	0
New Parchment for Tympan, each	0	3	0
Old ditto	0	1	6
Blankets, swansdown, per pair	0	4	6
Ditto broadcloth			
Ditto flannel			

	£.	s.	d.
Points, per pair	0	1	0
Frisket, royal	0	8	0
Ditto demy	0	7	0
Ditto foolscap	0	7	0
Pick-Brush	0	1	2
Press Candlesticks, a set	1	1	0
Pelts, each	0	1	4
Wool, per pound	0	1	2
Ball-Stocks, per pair	0	1	6
Ball-Nails, per 100	0	0	10
Sheep's Foot	0	1	6
Screw-Key	0	1	0
Printing Ink, per pound	0	10	6
Ditto	0	7	6
Ditto	0	5	0
Ditto	0	2	6
Ditto	0	1	6
Ditto	0	1	4
Poling, per foot	0	0	2½
Peel	0	5	0
Book-Press and Bar	5	5	0
Ditto, Iron Screw	18	18	0
Pressing Boards, octavo	0	1	0
Ditto quarto	0	2	6
Ditto foolscap	0	3	6
Ditto demy	0	4	6
Ditto royal	0	6	0

No. IX.

A List of the Letter-founders, Printing Ink-makers, Printers' Joiners and Press-makers, Brass Border and Ornament Cutters, Engravers on Wood, Printers' Smiths, and Brokers, of London.*

Letter-founders.

Caslon, Mrs. and Catherwood, Chiswell-street, Moorfields.

Figgins, Vincent, West-street, Smithfield.

Fry, Edmund, and Co. (to the Prince of Wales), Type-street, Chiswell-street, Moorfields.

Thorne, Robert.

Printing Ink-makers.

Anstie, P. 8, Rosamond-row, Clerkenwell.

Atkinson, J. M. Asylum-buildings, Westminster-road.

Blackwell, King-street, Compton-street, Clerkenwell.

Graham, Duke-street, Lincoln's Inn-fields.

Harris, J. E. 1, Water-lane, Fleet-street.

Walker and Co. Patent Ink-works, King-street, Rotherhithe.

Whittingham and Scarlet, 57, Carnaby-street, Golden-square.

Printers' Joiners and Press-makers.

Arding, J. and Son, Dorset-street, Salisbury-square, Fleet-street.

Brooke, Castle-street, Holborn.

Matthews, 45, Duke-street, Lincoln's Inn-fields.

Winch and Mead, Back-hill, Hatton-garden.

Brass Border and Ornament Cutters.

Brook, 302, Strand.

Paas, C. and A. 53, Holborn.

Timbury, 104, Fetter-lane.

* The list of Master Printers is omitted, as it was impossible to make it perfectly correct.

Engravers on Wood.

Austin, Paul's-alley, Barbican.

Barnsby, J. Angel-court, Strand.

Berryman, 8, Johnson's-court, Fleet street.

Branston, 9, Owen's-row, Islington-road.

Dorrington, W. Wood Letter-cutter, 16, Howard's-green, City-road.

Innes, 1, Gracechurch-street.

Jackson, J. St. John's-court, Cow-lane, Smithfield.

Nesbitt, C. Chelsea.

Nesbitt, J

Printers' Smiths.

Cook (and Brass Rule-cutter), 66, Leather-lane, Holborn.

Crow, G. and James, J. White Horse-court, Cow-cross.

Frith, A. Green Arbour-court, Old Bailey.

Logan, J. Warwick-lane.

Shield and Co. Stanhope press Manufacturers, High-holborn.

Walker, ditto, Dean-street, Oxford-street.

Waterstone, 17, Liquorpond-street, Gray's Inn-lane.

Brokers.

Delahoy, J. (and Auctioneer,) Deptford-bridge,

Fenwick, Little Moor-fields.

Fricker, 114, Chancery-lane.

No. X.

ABSTRACT OF ACTS RELATIVE TO PRINTERS.

By the Act 13 Geo. II. c. 19, (to restrain and prevent the excessive increase of horse races, &c.) it is enacted, "That every person or persons who shall make, print, publish, advertise, or proclaim any advertisement or notice of any plate, prize, sum of money, or other thing, of less value than fifty pounds, to be run for by any horse, mare, or gelding, shall forfeit and lose the sum of one hundred pounds."

By the Act 25 Geo. II. cap. 36, (for the better preventing thefts and robberies), it is enacted, "That any person publicly advertising a reward with 'No questions asked,' for the return of things which have been stolen or lost, or making use of any such words in such public advertisement, &c. shall for every such offence forfeit fifty pounds."

The Act 39 Geo. III. cap. 79, (for the more effectual suppression of societies established for seditious and treasonable purposes), contains several provisions and penalties respecting printers, letter founders, and printing press makers.

Sect 23 enacts, "That, from and after the expiration of forty days from the day of passing this Act, every person having any printing press, or types for printing, shall cause a notice thereof, signed in the presence of and attested by one witness, to be delivered to the clerk of the peace acting for the county, stewardry, riding, division, city, borough, town, or place, where the same shall be intended to be used, or his deputy, according to the form prescribed in the schedule hereunto annexed; and such clerk of the peace, or deputy respectively, shall, and he is hereby authorized and required to grant a certificate in the form prescribed in the schedule hereunto

annexed, for which such clerk of the peace, or deputy, shall receive the fee of one shilling, and no more ; and such clerk of the peace, or his deputy, shall file such notice, and transmit an attested copy thereof to one of his Majesty's principal secretaries of state ; and every person who, not having delivered such notice and obtained such certificate as aforesaid, shall, from and after the expiration of forty days next after the passing of this Act, keep or use any printing press or types for printing, or, having delivered such notice and obtained such certificate as aforesaid, shall use any printing press or types for printing in any other place than the place expressed in such notice, shall forfeit and lose the sum of twenty pounds."

Sect. 24 exempts his Majesty's printers, and the public presses belonging to the two universities.

Sect. 25 and 26 relate to type founders and printing press makers.

Sect. 27 enacts, " That from and after the expiration of forty days after the passing of this Act, every person who shall print any paper or book whatsoever, which shall be meant or intended to be published or dispersed, whether the same shall be sold or given away, shall print upon the front of every such paper, if the same shall be printed on one side only, and upon the first and last leaves of every paper or book which shall consist of more than one leaf, in legible characters, his or her name, and the name of the city, town, parish, or place, and also the name (if any) of the square, street, lane, court, or place, in which his or her dwelling house or usual place of abode shall be ; and every person who shall omit so to print his name and place of abode on every such paper or book printed by him, and also every person who shall publish or disperse, or assist in publishing or dispersing, either gratis or for money, any printed paper or book, which shall have been printed after the expiration of forty days from the passing of this Act, and on which the name and place of abode of the person printing the same shall not be printed as aforesaid, shall, for every copy of such paper so published or dispersed by him, forfeit and pay the sum of twenty pounds."

Sect. 28 exempts papers printed by authority of either house of parliament.

Sect. 29 enacts, " That every person who, from and after the expiration of forty days after the passing of this Act, shall print any paper for hire, reward, gain, or profit, shall carefully preserve and

keep one copy (at least) of every paper so printed by him or her, on which he or she shall write, or cause to be written or printed, in fair and legible characters, the name and place of abode of the person or persons by whom he or she shall be employed to print the same; and every person printing any paper for hire, reward, gain, or profit, who shall omit or neglect to write, or cause to be written or printed as aforesaid, the name and place of his or her employer on one of such printed papers, or to keep or preserve the same for the space of six calendar months next after the printing thereof, or to produce and shew the same to any justice of the peace, who, within the said space of six calendar months, shall require to see the same, shall, for every such omission, neglect, or refusal, forfeit and lose the sum of twenty pounds."

Form of Notice to be given to the Clerk of the Peace, that any Person keeps any Printing Press or Types for Printing.

To the clerk of the peace for ——— [here insert the county, stewardry, riding, division, city, borough, town, or place,] or his deputy.

I, A. B. of ——— do hereby declare that I have a printing press and types for printing, which I propose to use for printing within ———, and which I require to be entered for that purpose, in pursuance of an Act passed in the thirty-ninth year of the reign of his Majesty King George the Third, entitled, "An Act for the more effectual suppression of societies established for seditious and treasonable purposes, and for better preventing treasonable and seditious practices."

Witness my hand this ——— day of ———

Signed in the presence of ———.

The Committee of Master Printers were led to a publication of these Extracts, not only from a report to them of convictions being had on both the Acts of Geo. II; but also recent attempts (which have come to their knowledge) of a person under a fictitious name having applied at several offices to have “a fac simile title” printed to some old or perhaps foreign edition of a Latin book, in order to make a set or two, in his library, complete. With this and such like specious professions has he imposed on several offices, and brought his informations against one; in which however he has not only completely failed of success, but has also been brought to avow his motives, and give up his employer.

In this Information { John Bell, of Hyde-street, Bloomsbury, was Prosecutor.
 { Mr. James Whiting, of Finsbury-square, Defendant.

Wm. Abbott, of No. 19, Martlet-court, Bow-street, Covent-garden, on his examination, as Witness for the Prosecution, states that he is a general dealer in Books, or any thing else; and says,—“ I went to the house of defendant, where I saw a young man, and said I had some books wanting new titles. Got them the 19th of July last. I had one set of the books at home, 3 vols. and 20 title pages by me. My representation was, that they were defaced, and I wanted fair ones. I gave various names to various printers. I gave the name of Aldridge, and said (I think) I lived at Highbury-place, Islington. I got them printed for the very purpose of laying informations. I have employed myself three months, and been paid by a Bookseller, named Eglin, living at No. 6, Church-street, Soho, at no certain salary, but having money at different times as I wanted it. Not paid by the day, nor by the shops I go to. We have had no settlement; I have had money on account, and look upon myself as paid in full, because I think I have had more than I ought;—kept no account—about 26 or 27l. Mr. Eglin is the informer in none.”

No. XI.

TECHNICAL TERMS USED IN PRINTING.

Ball-knife.—A blunt knife used to scrape the balls.

Ball-nails.—Tacks used in knocking up balls.

Bank.—A stage about four feet high, placed near the press.

Beard of a letter.—The outer angle of the square shoulder of the shank, which reaches almost to the face of the letter, and commonly scraped off by founders.

Bearer.—A piece of riglet to bear the impression off a blank page.

Bite.—Is when the entire impression of the page is prevented by the frisket's not being sufficiently cut out.

Blankets.—Woollen cloth, or white baize, to lay between the tympan.

Body.—The shank of the letter.

Bottle-arsed.—When letter is wider at the bottom than the top.

Bottom-line.—The last line of the page preceding the catch line.

Brayer.—Is a round wooden rubber, almost of the fashion of a ball-stock, but flat at the bottom, and not above three inches diameter : it is used in the ink-block to bray or rub ink.

Break.—A piece of a line.

Broadside.—A form of one full page, printed on one side of a whole sheet of paper.

Broken Letter.—By broken letter is not meant the breaking of the shanks of any of the letters, but the breaking the orderly succession the letters stood in a line, page, or form, &c. and mingling the letters together, which mingled letters are called pie.

It is more properly termed broken matter.

Bur.—When the founder has neglected to take off the roughness of the letter in dressing.

Cards.—About a quire of paper, which pressmen use to pull down the spring or rising of a form, which it is many times subject to by hard locking up.

Cassie Paper.—Broken paper.

Choke.—If a form be not washed in due time, the ink will get into the hollows of the face of the letter; and that getting in of the ink is called choking of the letter, or choking of the form.

Clean Proof.—When a proof has but few faults in it, it is called a clean proof; and when a proof is to be sent to the author, the pressmen are ordered to pull a clean proof.

Close Matter.—Matter with few breaks or whites.

Correct.—When the corrector reads the proof, or the compositor mends the faults marked in the proof, they are both said to correct; the corrector the proof, the compositor the form.

Corrections.—The letters marked in the proof are called corrections.

Devil.—The errand boy of a printing-office.

Direction.—The word that stands alone on the right hand, in the bottom line of a page.

Direction-line.—The line the direction stands in.

Double.—Among compositors, a repetition of words; also, among pressmen, a sheet that is twice pulled and lifted ever so little off the form after it was first pulled, does most commonly, (through the play of the joints of the tympan), take a double impression: this sheet is said to double. Doubling also happens by the loose hanging of the plattin, and by too much play the tenons of the head may have in the mortises of the cheeks, and indeed may be occasioned by the decay of several parts of the press.

Dressing a chase, or form.—The fitting the pages and chase with furniture and quoins.

Drive out.—When a compositor sets wide.

Empty press.—A press that is unemployed. In general every printing-office has one for a proof press.

Even page.—The 2d, 4th, 6th, or any other even numbered page.

Fat face,—or fat letter, is a broad stemmed letter.

Fat work.—Is when there are many white-lines or break-lines in a work.

Fat form.—When the pressman has a single pull.

First form.—The form the white paper is printed on, which generally has the first page of the sheet in it.

Fly.—The person that takes off the sheet from the press in cases of expedition.

Follow.—That is, see if it follows; is a term used as well by the corrector as by the compositor and pressman. It is used by the corrector and compositor when they examine how the beginning matter of a succeeding page agrees with the ending matter of the precedent page; and how the folios of those pages properly and numerically follow and succeed one another, lest the pages should be transposed. But the pressman only examines that the folio and beginning word of the second page and signature of the first and third page, when the reiteration is on the press, follows the folio and direction of the first page, and the signature of the third page follows the signature of the first page, lest the form should be laid wrong on the press.

Foot of a page.—The bottom or end of a page.

Form.—The pages when fitted into a chase.

Foul proof.—When a proof has many faults marked in it.

Fount.—The whole number of letters that are cast of the same body and face.

Friar.—When the balls do not take, the un-taking part of the balls that touches the form will be left white; or if the pressmen skip over any part of the form, and touch it not with the balls, though they do take, yet in both these cases the white places are called friars.

Full form or page.—A form or page with few or no breaks or white lines.

Full press.—When two men work at the press.

Fudge.—To contrive without necessary materials, or do work in a bungling manner.

Get-in.—Matter is got in in a line, page, sheet, or book, if letter be thinner cast than the printed copy the compositor sets from; or matter is got in if the compositor sets closer.

Good colour.—Sheets printed neither too black nor too white.

Good of the chapel.—Forfeitures and other chapel dues collected for the good of the chapel, to be spent as the chapel approves.

Good work.—Is so called in a twofold sense: the master-printer calls it good work when the compositors and pressmen have done their duty; and the workmen call it good work if it be light, easy work, and they have a good price for it.

Half-press.—When but one man works at the press.

Half work.—He that works but three days in the week does but half work.

Head page.—The beginning of a subject.

Heap.—So many reams or quires as are set out by the warehouse-keeper for the pressman to wet.

Heap holds out.—When it has its full number of sheets.

Holds out or not holds out.—These terms are applicable to the quires of white paper, to wrought-off heaps, to gathered books, and sorts of letter, &c. . If quires of white paper have twenty-five sheets each in them, they say, the paper holds out five and twenties. Of wrought-off heaps, the heap that comes off first in gathering is said not to hold out. Of gathered books, if the intended number or perfect books are gathered, they say the impression holds out ; but if the intended number of perfect books cannot be gathered off the heaps, they say the impression holds not out. And so for sorts of letter.

Horse.—The stage on which the pressmen set the heaps of paper on their banks.

Horse.—If any journeyman set down in his bill on Saturday night more work than he has done, that surplus is called horse.

Hours.—Pressmen reckon their work by hours, reckoning every token to be an hour's work ; and though it be the same effectually with tokens, yet they make their prices of different work by the hour, and it passes current for a token. If two men work at the press, ten quires is an hour ; if one man, five quires is an hour.

Imperfections of letters.—When the founder has not cast a proportionable number of each sort of letter, it is making the rest of the fount imperfect.

Insertion.—If the compositor has left out words or lines, the corrector inserts it, and makes this mark Δ where it is left out.

Keep in.—Is a caution either given to, or resolved on, by the compositor, when there may be doubt of driving out his matter beyond his counting off, wherefore he sets close to keep in.

Keep out.—The practice opposite to the preceding.

Kern of a letter.—That part which hangs over the body or shank.

Lean face.—A letter whose stems and strokes have not their full width.

Letter hangs.—If the compositor is careless in emptying his composing stick, so as to set the letter loosely down in the galley, and they stand not perfectly square and upright the letter hangs ; or if

after overrunning on the correcting stone, he has not set his letter in a square position again, before he locks up, the letter thus out of square is said to hang.

Long pull.—Is when the bar of the press requires to be brought close to the cheek to make a good impression.

Low case.—When the compositor has composed almost all the letters out of his case.

Mackle.—When part of the impression on a page appears double, owing to the platin's dragging on the frisket.

Matter.—The series of the discourse of the compositor's copy; also the letter, when composed, is called matter.

Measure.—The width of a page.

Monk.—When the pressman has not distributed his balls, and the ink lies in blotches, it is called a monk.

Naked form.—When the furniture is taken from about all the sides of the pages.

Odd page.—The 1st, 3d, and all uneven numbered pages.

Off.—Pressmen are said to be off when they have worked off the designed number from a form.

Out.—A compositor is said to be out when he has composed all his copy.

Out of register.—When pages are not worked even on each other.

Pale Colour.—When the sheets are worked off with too little ink.

Pelts.—Untanned sheep-skins used for balls.

Picks.—When any dirt gets into the hollows of the letter, which chokes up the face of it, and occasions a spot.

Point-holes.—Holes made by the points in a worked-off sheet of paper.

Press goes.—When the pressmen are at work.

Pie.—When a page is broken, and the letters confused.

Quarters.—Octavos and twelves forms are said to be imposed in quarters, not from their equal divisions, but because they are imposed and locked up in four parts.

Register-sheet.—Sheet or sheets printed to make register with.

Reiteration.—The second form, or the form printed on the back side of the white paper.

Riglet.—A thin sort of furniture, of an equal thickness all its length. It is quadrat high, of several thicknesses.

Rise.—A form is said to rise, when in rearing it off the correcting-stone no letter or furniture, &c. drop out.

Runs on sorts.—When only a few sorts of letters are used in a work.

Set off.—Sheets that are newly worked off at the press often set off, and more particularly so when beaten with soft ink.

Shank.—The square metal the face of a letter stands on.

Signature.—Any letter of the alphabet used at the bottom of the first page of a sheet, as a direction for the binders to place the sheets in a volume.

Slur.—When the impression of the sheets appear smeared.

Smout.—When either compositors or pressmen are employed for a short time, and not engaged for a constancy.

Sop the balls.—When a pressman has taken too much ink.

Sorts.—The letters that lie in every box of the case are separately called sorts in printers' and founders' language.

Squabble.—A page or form is squabbled when the letter of one or more lines are got into any of the adjacent lines; or that the letter or letters are twisted about out of their square position.

Stem.—The name given to the straight, flat strokes of a straight letter.

Superior letters.—These are often set to marginal notes, references, or authorities; they are letters of a small face, justified by the founder in the mould near the top of the line.

Thin Space.—Ought by a strict, orderly, and methodical measure, to be made of the thickness of the seventh part of the body; though founders make them indifferently thicker or thinner.

Turn for a letter.—It often happens when matter runs upon sorts, especially in capitals or some other sorts seldom used, that the compositor wants that sort the matter runs on; wherefore he is loth to distribute letter for that sort, as perhaps his case is otherwise full. Then, instead of that letter or sort, he turns a letter of the same thickness, with the foot of the shank upwards, and the face downwards; which turned letter being easy to be seen, he afterwards, when he can accommodate himself with the right sort, takes out, and puts the right letter in its room. It is also a word used jocosely in the chapel; when any of the workmen complain of want of any thing, he shall by another workman be answered, Turn for it; that is, make shift for it.

Vantage.—When a white page or more happens in a sheet, the

compositor calls that vantage: so does the pressman, when a form of one pull comes to the press.

Underhand.—A phrase used by pressmen for the light and easy, or heavy and hard running in of the carriage. Thus they say, the press goes light and easy under hand, or it goes heavy or hard under hand.

Upper hand.—When the spindle goes soft and easy, the pressmen say, it goes well upper hand or above hand. But the contrary if it goes hard and heavy.

White line.—A line of quadrats.

White page.—A page that no matter comes in.

White paper.—Although the first form be printed off, yet pressmen call that heap white paper, till the reiteration be printed.

SPECIMENS

OF

PRINTING TYPES.

Specimens of modern-cut Printing Types, from the Foundries of Messrs. Fry and Steele, and Messrs. Caslon and Catherwood.

THE great improvement which has taken place of late years in the form of printing types, has completely superseded the Elzevir shape introduced from Holland by the celebrated Caslon, near ninety years ago. Every one must observe, with increasing admiration, the numerous and elegant founts of every size, which have with rapid succession been lately presented to the public. On the beauty, variety, or just arrangement of the following specimens, it is unnecessary for us to enlarge, or make comparisons, wishing to leave that to the judgment or fancy of our brother printers.

We regret that we are prevented from laying before our readers specimens from the foundry of Mr. Figgins. We understand, however, that in a few months Mr. F. will have fully completed his specimens.

The first part of the following specimens, including the Blacks, Greeks, and Hebrews, is from the foundry of Messrs. FRY and STEELE.

French Canon.

Quousque tandem ab-
utere Catilina, patien

A B C D E F G H I J K L M

£ 1 2 3 4 5 6 7 8 9 0

French Canon.

*Quousque tandem abu
tere, Catilina, patientia
nostra? quamdiu nos*

ABCDEFGHIJKL

Two Lines Great Primer.

Quousque tandem abutere, Ca-
tilina, patientia nostra? quam-
diu nos etiam furor iste tuus
ABCDEFGHIJKLMN O P Q R S
ABCDEFGHIJKLMN O P Q R S T U V W X Y
£1234567890

Note.—An Italic of this size, on the same principle as the Canon, is nearly completed.

Two Lines English.

Quousque tandem abutere, Catilina, pa-
tientia nostra? quamdiu nos etiam furor
ABCDEFGHIJKLMN O P Q R S T U V
ABCDEFGHIJKLMN O P Q R S T £.1234567890

*Quousque tandem abutere, Catilina, pa-
tientia nostra? quamdiu nos etiam furor*
A A B C D E F G H I J K L M N O P Q R S

Double Pica.

**Quousque tandem abutere,
Catilina, patientia nostra?
quamdiu nos etiam furor iste**

ABCDEFGHIJKLMN O P

ABCDEFGHIJKLMN O P Q R S T U V W Æ Æ

1 2 3 4 5 6 7 8 9 0

**Quousque tandem abutere,
Catilina, patientia nostra?**

ABCDEFGHIJKLMN

Great Primer.

**Quousque tandem abutere, Catilina,
patientia nostra? quamdiu nos etiam
furor iste tuus eludet? quem ad fin-
em sese effrenata jactabit audacia?**

ABCDEFGHIJKLMN O P

ABCDEFGHIJKLMN O P Q R S T

£ 1 2 3 4 5 6 7 8 9 0

**Quousque tandem abutere, Catilina,
patientia nostra? quamdiu nos etiam
furor iste tuus eludet? quem ad finem**

ABCDEFGHIJKLMN O

ABCDEFGHIJKLMN O P Q R S T U V W X

Pica.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigilie, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam om-

A B C D E F G H I J K L M N O P Q R S T U V W

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

£ 1 2 3 4 5 6 7 8 9 0

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigilie, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sen-

A A B C D E F G H I J K L M M N N O P Q R S T V

A A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Note.—The English and Small Pica specimens, upon the same principle as the above, having been destroyed in one of the late fires, is the cause of their not appearing in this work.

Long Primer on Small Pica Body.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigilie, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nos-

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Long Primer.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Burgeois. No. 1.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia

A B C C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ £ 1 2 3 4 5 6 7 8 9 0

Burgeois. No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

1 2 3 4 5 6 7 8 9 0

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus? nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia

A A B C D E F G H I J K L M M N N O P Q R S T U V W X Y Z Æ Æ

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Brevier. No. 1.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitra-

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1234567890

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

1234567890

Brevier. No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convo-

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia: nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores? Senatus hoc intelli-

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

Minion.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempo-

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ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia: nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quo convocaveris, quid consilii ceperis,

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

ABCDEFGHIJKLMN OPQRSTU VWXYZÆ

Nonpareil.

NONPAREIL ROMAN, OR MINION BODY.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: sit publici consilii particeps: notat et designat oculis ad eandem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussa consulis jampridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio,

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

NONPAREIL ROMAN, No. 3.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: sit publici consilii particeps: notat et designat oculis ad eandem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussa consulis jampridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pes-

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ K

Æ B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ K

Æ 1934567890

NONPAREIL ROMAN, No. 4.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: sit publici consilii particeps: notat et designat oculis ad eandem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussa consulis jampridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum medio caeteris labefactantem statum reipublicae privatus interfecit? Catili-

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Æ B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ K

Æ 1934567890

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: sit publici consilii particeps: notat et designat oculis ad eandem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussa consulis jampridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Note.—A Pearl, on the same principle as the Nonpareil, will be completed in a few weeks.

Double Pica Two Lines shaded.

A B C D E F S

English Two Lines ornamented.

A B C D E F G H J Q

Small Pica Two Lines.

A B C D E F G H J K L M

Brevier Two Lines.

A B C D E F G H I J K L M N S

A B C D E F G H I J K L M P

Nonpareil Two Lines.

A B C D E F G H I J K L M N O P Q V &

A B C D E F G H I J K L M N O P Q R W

Four Lines Pica Black, open.

And be it fur
ther hereby e
nacted, That

Four Lines Pica Black.

And be it fur
ther hereby e
nacted, That

Two Lines Great Primer Black.

And be it further he
reby enacted, That
the Mayors, Bailiff

Two Lines English Black.

And be it further hereby
by enacted, That the M

Double Pica Black.

And be it further hereby ena-
cted, That the Mayors, Bai-
liffs, or other head Officers,

Great Primer Black.

And be it further hereby enacted,
That the Mayors, Bailiffs, or o-
ther head Officers of every Town
and place corporate, and City with-

English Black. No. 1.

And be it further hereby enacted, That the
Mayors, Bailiffs, or other head Officers
of every Town and place corporate, and
City within this Realm, being Justice or
Justices of Peace, shall have the same au-

English Black. No. 2.

And be it further hereby enacted, That the Ma-
yors, Bailiffs, or other head Officers of every
Town and place corporate, and City within
this Realm, being Justice or Justices of Peace,
shall have the same authority by virtue of this

Pica Black. No. 1.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this

Pica Black. No. 2.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this

Small Pica Black.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Ses-

Long Primer Black.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Sessions, as at their Sessions, if they hold any, as is herein limited, prescribed and appointed to Justices of

Brevier Black.

And be it further hereby enacted. That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Sessions, as at their Sessions, if they hold any, as is herein limited, prescribed and appointed to Justices of Peace of the County, or any two or more of them, or to

בראשית ברא אלהים
את השמים ואת
הארץ : והארץ היתה

Two Lines Great Primer Hebrew, with Points.

בְּרֵאשִׁית בְּרָא אֱלֹהִים
אֶת הַשָּׁמַיִם וְאֶת
הָאָרֶץ : וְהָאָרֶץ הָיְתָה

Two Lines English Hebrew.

בראשת ברא אלהים את
השמים ואת הארץ : והארץ
היתה תהו ובהו והשך על-פני

Two Lines English Hebrew, with Points.

בְּרֵאשֶׁת בְּרָא אֱלֹהִים אֶת
הַשָּׁמַיִם וְאֶת הָאָרֶץ : וְהָאָרֶץ
הָיְתָה תְהוּ וּבְהוּ וְחָשֶׁךְ עַל-פְּנֵי

בראשית ברא אלהים את השמים
ואתה ארץ: והארץ היתה תהו ובהו
וחשך על-פני תהום ורוח אלהים מר-
חפת על-פני המים: ויאמר אלהים
יהי אור ויהי-אור: וירא אלהים את-
האור כי-טוב ויברל אלהים בין האור

בראשית ברא אלהים את השמים
ואת הארץ: והארץ היתה תהו ובהו
וחשך על-פני תהום ורוח אלהים
מרחפת על-פני המים: ויאמר אלהים
יהי אור ויהי-אור: וירא אלהים את-
האור כי-טוב ויברל אלהים בין האור

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם
וְאֶת הָאָרֶץ: וְהָאָרֶץ הָיְתָה תְהוֹ וּבְהוֹ
וַחֲשָׁךְ עַל-פְּנֵי תְהוֹם וְרוּחַ אֱלֹהִים
מְרַחֶפֶת עַל-פְּנֵי הַמַּיִם: וַיֹּאמֶר אֱלֹהִים
יְהִי אוֹר וַיְהִי-אוֹר: וַיֵּרָא אֱלֹהִים אֶת-
הָאוֹר כִּי-טוֹב וַיְבָרֶךְ אֱלֹהִים בֵּין הָאוֹר

בראשית ברא אלהים את השמים ואת הארץ :
והארץ היתה תהו ובהו וחשך על־פני תהום ורוח
אלהים מרחפת על־פני המים : ויאמר אלהים יהי
אור ויהי־אור : וירא אלהים את־האור כי־טוב ויבדל
אלהים בין האור ובין החשך : ויקרא אלהים לאור

English Hebrew. No. 2.

בראשית ברא אלהים את השמים ואת הארץ :
והארץ היתה תהו ובהו וחשך על־פני תהום ורוח
אלהים מרחפת על־פני המים : ויאמר אלהים יהי
אור ויהי־אור : וירא אלהים את־האור כי־טוב ויבדל
אלהים בין האור ובין החשך : ויקרא אלהים לאור

English Hebrew. No. 2, with Points.

בְּרֵאשִׁית בָּרָא אֱלֹהִים יֵת הַשָּׁמַיִם וְאֶת הָאָרֶץ :
וְהָאָרֶץ הָיְתָה תֵּהוֹ וּבְהוֹ וְחָשֶׁךְ עַל־פְּנֵי תְהוֹם וְרוּחַ
אֱלֹהִים מְרַחֶפֶת עַל־פְּנֵי הַמַּיִם : וַיֹּאמֶר אֱלֹהִים יְהִי
אוֹר וַיְהִי־אוֹר : וַיַּרְא אֱלֹהִים אֶת־הָאוֹר כִּי־טוֹב וַיַּבְדֵּל
אֱלֹהִים בֵּין הָאוֹר וּבֵין הַחֹשֶׁךְ : וַיִּקְרָא אֱלֹהִים לְאוֹר

Pica Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ
היתה תהו ובהו וחשך על־פני תהום ורוח אלהים מרחפת
על־פני המים : ויאמר אלהים יהי אור ויהי־אור : וירא אלהים
את־האור כי־טוב ויבדל אלהים בין האור ובין החשך :
ויקרא אלהים לאור יום ולחשך קרא לילה ויהי־ערב ויהי־

Small Pica Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו
וחשך על־פני תהום ורוח אלהים מרחפת על־פני המים : ויאמר אלהים
יהי אור ויהי־אור : וירא אלהים את־האור כי־טוב ויבדל אלהים בין
האור ובין החשך : ויקרא אלהים לאור יום ולחשך קרא לילה ויהי־ערב
ויהי־בקר יום אחד : ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל

Long Primer Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו וחשך על-פני תהום ורוח אלהים מרחפת על-פני המים: ויאמר אלהים יהי אור ויהי-אור: וירא אלהים את-האור כי-טוב ויבדל אל-הים בין האור ובין החשך: ויקרא אלהים לאור יום ולחשך קרא לילה ויהי-ערב ויהי-בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים: ויעש אלהים את-הרקיע ויבדל בין המים אשר מתחת לרקיע ובין המים אשר מעל לרקיע ויהי-כן: ויקרא אלהים

Burgois Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו וחשך על-פני תהום ורוח אלהים מרחפת על-פני המים: ויאמר אלהים יהי אור ויהי-אור: וירא אלהים את-האור כי-טוב ויבדל אלהים בין האור ובין החשך: ויקרא אלהים לאור יום ולחשך קרא לילה ויהי-ערב ויהי-בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים: ויעש אלהים את-הרקיע ויבדל בין המים אשר מתחת לרקיע ובין המים אשר מעל לרקיע ויהי-כן: ויקרא אלהים לרקיע שמים ויהי-ערב ויהי-בקר יום שני: ויאמר אלהים יקוו המים מתחת השמים אל-מקום אחד ותראה היבשה ויהי-כן:

Brevier Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו וחשך על-פני תהום ורוח אלהים מרחפת על-פני המים: ויאמר אלהים יהי אור ויהי-אור: וירא אלהים את-האור כי-טוב ויבדל אלהים בין האור ובין החשך: ויקרא אלהים לאור יום ולחשך קרא לילה ויהי-ערב ויהי-בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים: ויעש אלהים את-הרקיע ויבדל בין המים אשר מתחת לרקיע ובין המים אשר מעל לרקיע ויהי-כן: ויקרא אלהים לרקיע שמים ויהי-ערב ויהי-בקר יום שני: ויאמר אלהים יקוו המים מתחת השמים אל-מקום אחד ותראה היבשה ויהי-כן: ויקרא אלהים ליבשה ארץ ולמקוה המים קרא ימים וירא אלהים

Small Pica Rabbinical Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים: ויאמר אלהים יהי אור ויהי אור: וירא אלהים את האור כי טוב ויבדל אלהים בין האור ובין החשך: ויקרא אלהים לאור יום ולחשך קרא לילה ויהי ערב ויהי בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים: ויעש אלהים את הרקיע ויבדל בין המים אשר מתחת לרקיע ובין המים אשר מעל לרקיע ויהי כן: ויקרא

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου· γενήθῃτω τὸ θέλημά σου, ὡς ἐν ὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δός ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέ-

Great Primer Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου· γενήθῃτω τὸ θέλημά σου, ὡς ἐν οὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δός ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥύσαι

English Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς ὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου· γενήθῃτω τὸ θέλημά σου, ὡς ἐν ὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δός ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥύσαι ἡμᾶς ἀπὸ τῆς πονηροῦ· ὅτι σοῦ ἐσιν ἡ βασιλεία, καὶ ἡ δοξα εἰς τοὺς αἰῶνας. ἀμήν.

Pica Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου· γεννηθήτω τὸ θέλημά σου, ὡς ἐν οὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηροῦ· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν.

Small Pica Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου· γεννηθήτω τὸ θέλημά σου, ὡς ἐν οὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηροῦ· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν. Πατερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁ-

Long Primer Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σε. Ἐλθέτω ἡ βασιλεία σε· γεννηθήτω τὸ θέλημά σε, ὡς ἐν ἔρανῳ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηρῆς· ὅτι σὺ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τὰς αἰῶνας. ἀμήν. Πατερ ἡμῶν ὁ ἐν τοῖς ἔρανοῖς· ἁγιασθήτω τὸ ὄνομά σε. Ἐλθέτω ἡ βα-

Brevier Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σου. Ἐλθέτω ἡ βασιλεία σου. γεννηθήτω τὸ θέλημά σε, ὡς ἐν ἔρανῳ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηρῆς· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν. Πατερ ἡμῶν ὁ ἐν τοῖς ἔρανοῖς· ἁγιασθήτω τὸ ὄνομά σε. Ἐλ-

Nonpareil Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἁγιασθήτω τὸ ὄνομά σε. Ἐλθέτω ἡ βασιλεία σου. γεννηθήτω τὸ θέλημά σου, ὡς ἐν ἔρανῳ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δὸς ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηρῆς· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τὰς αἰῶνας. ἀμήν. Πατερ ἡμῶν ὁ ἐν τοῖς ἔρανοῖς· ἁγιασθήτω τὸ ὄνομά σε. Ἐλθέτω ἡ βασιλεία σου· γεννηθήτω τὸ θέλημά σε, ὡς ἐν ἔρανῳ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον,

CASLON AND CATHERWOOD'S

SPECIMEN

OF

PRINTING TYPES.

Note.—A Four-Line Pica, Canon, and Double Pica, of a bold and elegant shape, were not quite ready to introduce with these specimens.

Two Lines Great Primer.

Quousque tandem abutere, Catilina,
patientia nostra? quamdiu nos
etiam furor iste tuus eludet? quem

A B C D E F G H I J K L M N O P Q R S

A B C D E F G H I J K L M N O P Q R S T U V W X Y

£ 1234567890 1803.

Two Lines Great Primer.

*Quousque tandem abutere, Catilina,
patientia nostra? quamdiu
nos etiam furor iste tuus eludet?
quem ad finem sese effrenata jac-*

ABCDEFGHIJKLMN O P Q R

S T U V W X Y Z A E O

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste
ABCDEFGHIJKLMN O P Q R S T U
ABCDEFGHIJKLMN O P Q R S T £ 1234567890

*Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste
ABCDEFGHIJKLMN O P Q R S T U*

Quousque tandem abutere, Catilina,
 patientia nostra? quamdiu nos
 etiam furor iste tuus eludet? quem
 ad finem sese effrenata jactabit au-
 dacia? nihilne te nocturnum præsi

ABCDEFGHIJKLMN O P Q R S T
 A B C D E F G H I J K L M N £ 1 2 3 4 5 6 7 8 9 0

*Quousque tandem abutere, Catilina,
 patientia nostra? quamdiu nos etiam
 furor iste tuus eludet? quem ad finem
 A B C D E F G H I J K L M N O P Q Q R S*

English.

Quousque tandem abutere, Catilina, patientia
 nostra? quamdiu nos etiam furor iste tuus elu-
 det? quem ad finem sese effrenata jactabit au-
 dacia? nihilne te nocturnum præsidium palatii,
 nihil urbis vigiliæ, nihil timor populi, nihil
 tissimus habendi senatus locus, nihil horum ora

A B C D E F G H I J K L M N O P Q R S T U
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ
 50 76 89 £ 1 2 3 4 5 6 7 8 9 0 £ 12 34 62

*Quousque tandem abutere, Catilina, patientia
 nostra? quamdiu nos etiam furor iste tuus elu-
 det? quem ad finem sese effrenata jactabit au-
 dacia? nihilne te nocturnum præsidium palatii,
 nihil urbis vigiliæ, nihil timor populi, nihil con-
 A B C D E F G H I J K L M N O P Q Q R S*

Pica.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bono-
ABCDEFGHIJKLMN O P Q R S T U V W X Y Z Æ Æ
A B C D E F G H I J K L M N O P Q R S T U V W X Y £ 1 2 3 4 5 6 7 8 9 0

No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil
ABCDEFGHIJKLMN O P Q R S T U V W X Y Z Æ Æ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, ni-
ABCDEFGHIJKLMN O P Q R S T U V W X Y Z

Small Pica.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus
ABCDEFGHIJKLMN O P Q R S T U V W X Y Z Æ
£ 1 2 3 4 5 6 7 8 9 0 9 3 0 1 4 5 7 8 6 2 1 8 0 4.

No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus
ABCDEFGHIJKLMN O P Q R S T U V W X Y Z Æ Æ

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia, nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil
ABCDEFGHIJKLMN O P Q 2 R S T U V W X Y Z

Long Primer on Small Pica Body.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil ho-

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

Long Primer.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil ho-

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

No. 3.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

1234567890

£

1234567890

No. 4.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque mo-

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt?

ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

Burgeois.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam

ABDEFGHIJKLMNOPQRSTUVWXYZÆ

ABCDEFGHIJKLMNPOQRSTUVWXYZÆ

No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid

ABCDEFGHIJKLMNPOQRSTUVWXYZÆ 1234567890

1234567890 ABCDEFGHIJKLMNPOQRSTUVWXYZÆ 1234567890

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjura-

Brevier on Burgeois Body.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi

ABCDEFGHIJKLMNPOQRSTUVWXYZÆ

Brevier.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi

ABCDEFGHIJKLMNPOQRSTUVWXYZÆ

ABCDEFGHIJKLMNPOQRSTUVWXYZÆ

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima,

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Brevier. No. 2.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in Senatum venit: fit

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Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid su-

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Minion.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in Senatum venit: fit publici consilii particeps: notat et designat oculis ad cædem unumquemque nostrum. Nos autem viri forte satisfacere reipublicæ videmur; si istius furorem ac tela

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LARGE-FACED NONPAREIL.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad cædem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicæ videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussu consulis jam pri-

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NONPAREIL, No. 1.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad cædem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicæ videmur, si istius furorem ac tela vite-

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No. 3.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela

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NONPAREIL, No. 3. on PEARL BODY.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem

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PEARL.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia: nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci jussu consulis jam pridem oportebat: in te conferri pestem istam quam

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Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia: nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul videt: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus.

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TWO-LINE LETTERS.

Pica.

A B C D E F G H J K R

Small Pica.

A B C D E F G J K M

Long Primer.

A B C D E F G H I K L M P

A B C D E F G H I J K M

Burgeois.

A B C D E F G H I J K L M P

Brevier.

A B C D E F G H J K L M N Z Æ

Minion.

A B C D E F G H I J K L M N W

Nonpareil.

A B C D E F G H I J K L M N O P Q R S T U W

A B C D E F G H I J K L M N O P Q R S W

A B C D E F G H I J K L M N O P Q R S T U

A B C D E F G H I J K L M N O P Q R S T

Pearl.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y

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